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# Outlook

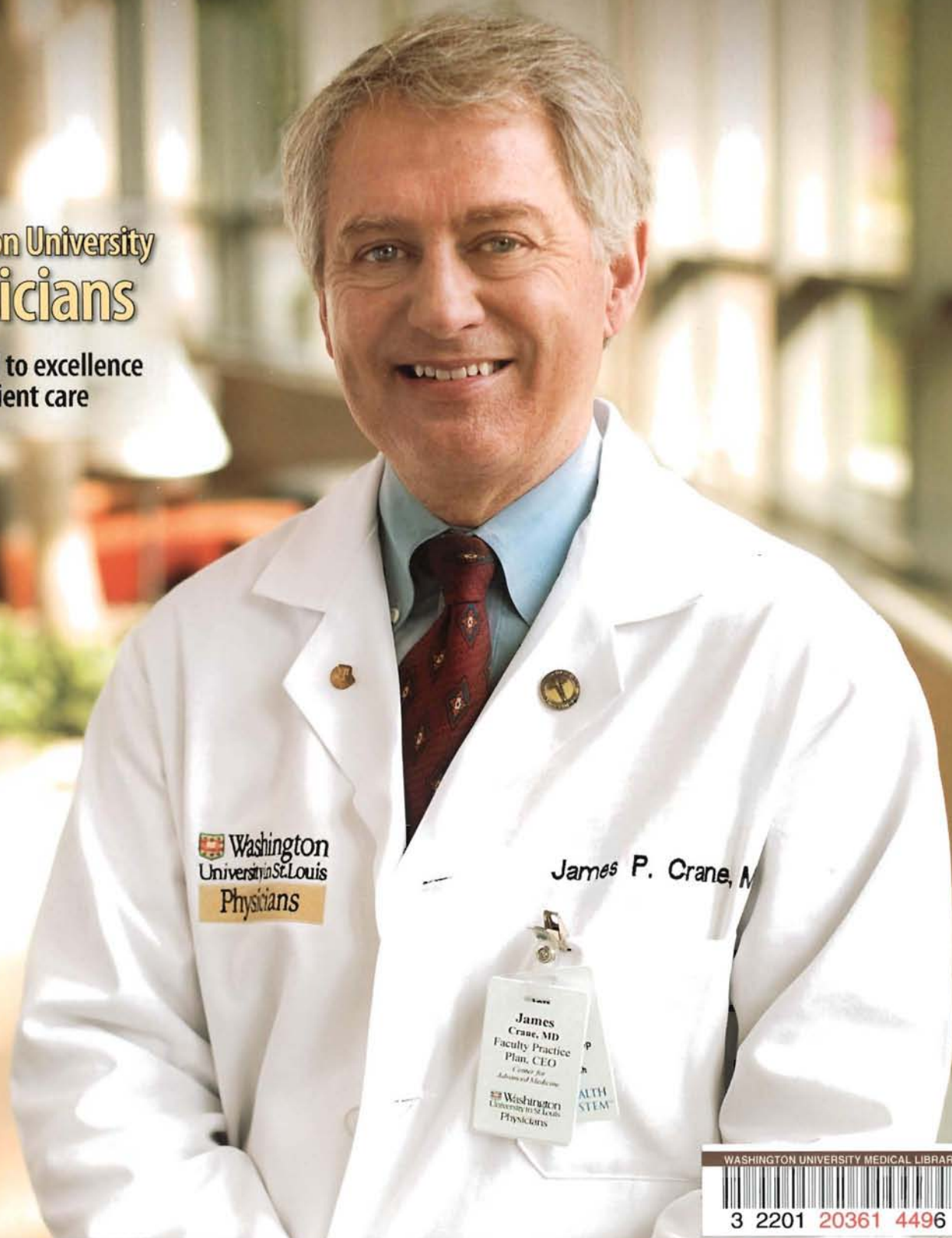
WINTER 2008



Washington  
University in St. Louis  
SCHOOL OF MEDICINE

## Washington University Physicians

Committed to excellence  
in patient care



Washington  
University in St. Louis  
Physicians

James P. Crane, MD



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**On the rise** It has been one year since the groundbreaking of the BJC Institute of Health at Washington University, and crews continue to work toward its scheduled opening in December 2009. The new, 700,000-square-foot facility is designed for Leadership in Energy and Environmental Design (LEED) certification, which recognizes green buildings for conserving energy and protecting the environment. When completed, the building will serve as the hub for BioMed 21, including five interdisciplinary research centers and some support operations for Barnes-Jewish Hospital.



ROBERT BOSTON

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**EDITOR HOLLY EDMISTON ART DIRECTOR ERIC YOUNG**

**PHOTOGRAPHER ROBERT BOSTON CIRCULATION KATHI LAW**

**outlook.wustl.edu** Phone: 314/286-0100 Fax: 314/286-0101

E-mail: hollyedmiston@wustl.edu

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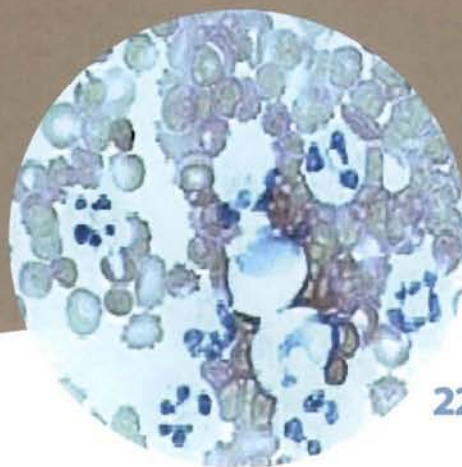
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# Outlook

Washington University School of Medicine

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**22** Silver solution

## Best Practices

**8** The advanced care provided by Washington University Physicians — on a foundation of great research — offers benefits to patients.

## The Safest SPOT in St. Louis

**14** A new center for teens offers a safe haven for testing for HIV and sexually transmitted diseases along with other health care services.

## Photo Essay: Forest Park

**17** The natural beauty and unique landmarks of Forest Park make it one of the premiere attractions in St. Louis.

## Simply Silver

**22** An antibacterial silver coating may pave the way for fewer infections in patients who need ventilator tubes — saving lives in the process.



**17** Seasons in the park

**COVER** James P. Crane, MD, associate vice chancellor for clinical affairs and chief executive officer of the School of Medicine's Faculty Practice Plan, at the Center for Advanced Medicine. To learn about the School's clinical care practice, Washington University Physicians, please turn to page 8.

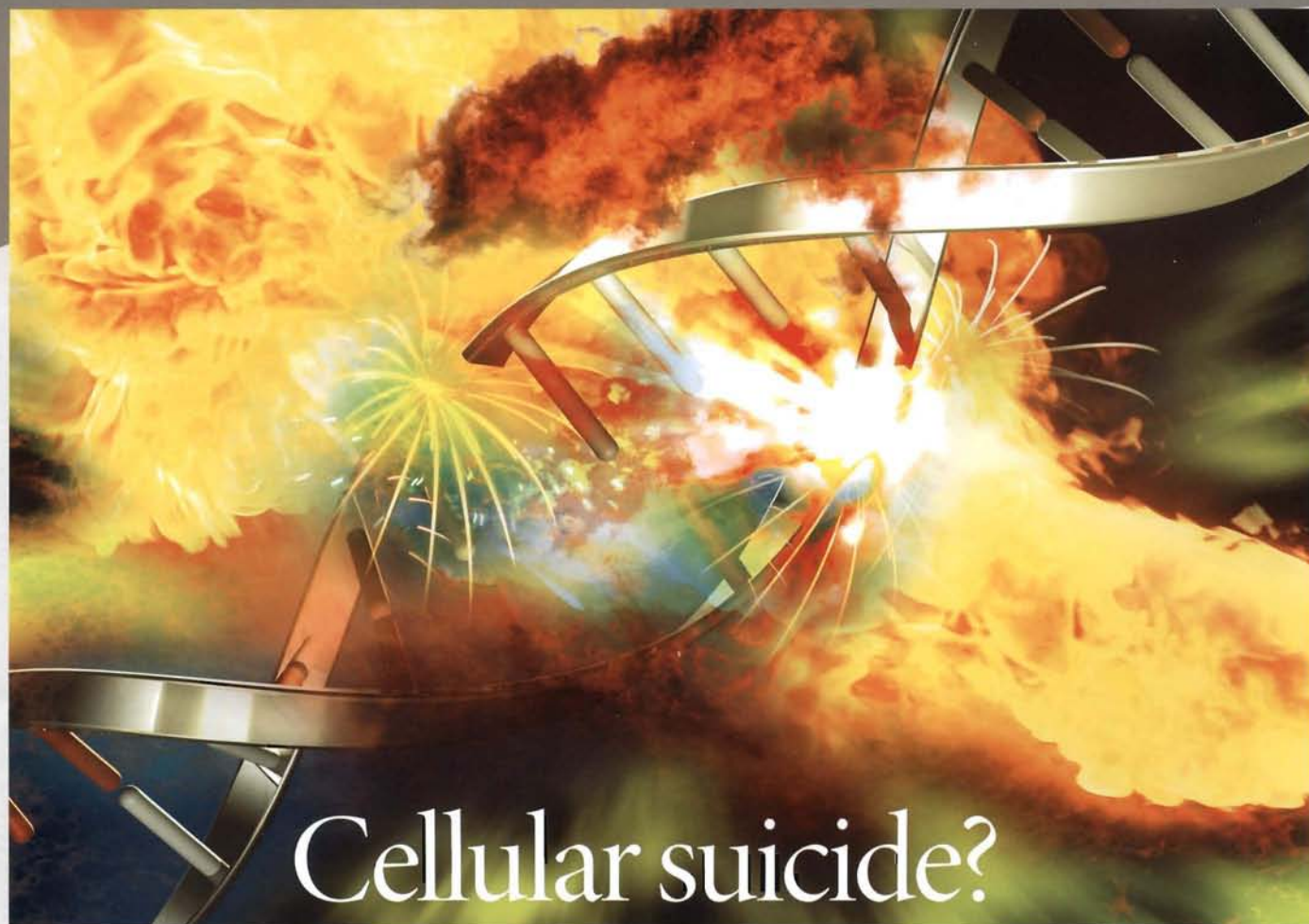
PHOTO BY MATTHEW O'SHEA

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# Cellular suicide?

## Actually, DNA breakage is a normal rite of passage for immune cells

**R**esearchers have shown that self-induced breaks in the DNA of immune cells known as lymphocytes activate genes that cause the cells to travel from where they're made to where they help the body fight invaders.

The new finding is the first to link such serious DNA damage to activation of genes not directly involved in either fixing the harm or causing the cell to self-destruct to prevent it from becoming cancerous. The timing of gene activation is critical to the ability of cells to take on specialized roles, and the finding, published in *Nature*, left researchers wondering whether other cell types also rely on genetic pathways triggered by DNA damage.

"Understanding the broader scope of the cells' responses to DNA damage could potentially be important in a wide

variety of contexts," says senior author Barry P. Sleckman, MD, PhD, director of the Division of Laboratory and Genomic Medicine. "For example, the cell sees the genetic material of some invaders, such as DNA viruses, as damaged DNA. Could pathogens be taking advantage? We don't know yet."

Scientists discovered two decades ago that lymphocytes deliberately break their own DNA in order to splice their genetic

**The finding links DNA damage to activation of genes not directly involved in cell repair or self-destruction.**



materials together in new ways. This remixing allows the lymphocytes to make proteins known as antibodies that recognize billions of different foreign substances.

Sleckman's lab induced double-stranded DNA breaks in lymphocytes using the same enzymes the cells normally use to create the breaks, and then analyzed the genes activated as a result.

As expected, the breaks turned on two groups of genes normally activated by DNA damage: one that pushes the cell toward self-destruction, another that pushes for survival of the cell and repair of the damaged DNA.

But lymphocyte-specific genes also were activated by the breaks.

"Several of these genes are involved in the migration and homing of lymphocytes," says Sleckman. "Lymphocytes are made in the bone marrow and the thymus, and they have to move to other niches, including the lymph glands, to do their work."



# Gordon, Holtzman elected to Institute of Medicine ranks

## High honor for U.S. medical scientists

Jeffrey I. Gordon, MD, and David M. Holtzman, MD, have been elected to the Institute of Medicine of the National Academy of Sciences, recognized for their major contributions to the advancement of the medical sciences, health care and public health and for their commitment to service.

Gordon is the Dr. Robert J. Glaser Distinguished University Professor and director of the Center for Genome Sciences. He is internationally known for his research on gut development and how gut microbes affect normal intestinal function, and predisposition to health and to certain diseases. His research has shown that gut microbes are biomarkers, mediators and potential therapeutic targets in the war against the worldwide obesity epidemic. By sequencing the genes present in gut microbial communities of obese and lean mice, and by observ-



Jeffrey I. Gordon, MD

ing the effects of transplanting these communities into germ-free mice, he has shown that microbial communities from obese mice have an increased capacity to harvest calories from the diet. His work in humans is focusing on lean, obese and malnourished twins in order to obtain a deeper understanding of how we acquire gut microbes, the genomic and metabolic underpinnings of their beneficial relationships with us, and how they help shape the nutritional needs of humans living in various parts of the world.



David M. Holtzman, MD

Holtzman is the Andrew B. and Gretchen P. Jones Professor and chair of the Department of Neurology. He is known as one of the leading experts in researching the underlying mechanisms that lead to Alzheimer's disease in an effort to improve diagnosis and treatment. In addition to seeing patients at the Alzheimer's

Disease Research Center and the Memory Diagnostic Center, Holtzman leads a research team working with animal models of Alzheimer's and works closely with the Washington University Alzheimer's Disease Research Center. His group has been instrumental in revealing mechanisms underlying how dangerous amounts of a protein called amyloid-beta begin to accumulate in the brain many years before symptoms arise. These basic science investigations have evolved and are beginning to bridge the gap into the clinical arena.



**Top teachers** David Rosen, left, a third-year medical student, Gladys Tse, MD, assistant professor of obstetrics and gynecology, Arie Perry, MD, professor of pathology and immunology, and Amit Patel, a third-year medical student and president of the Class of 2010, discuss the Distinguished Service Teaching Awards after the November 18 ceremony at the Eric P. Newman Education Center. Tse was named Clinical Lecturer of the Year by the Class of 2009; Perry was named Professor of the Year by the Class of 2010. To see a complete list of awardees, visit [mednews.wustl.edu/DSTA](http://mednews.wustl.edu/DSTA).

## New tool in breast cancer research

A new predictive measurement, called a PEPI score, could bring good news to many women diagnosed with early-stage breast cancer — a low PEPI (preoperative endocrine prognostic index) score could show they have little risk of relapse and can safely avoid chemotherapy after surgery.

For others, a high PEPI score could warn that the risk of relapse after breast surgery is large and indicates that careful follow-up and aggressive therapy may be needed, say researchers at the School of Medicine and collaborating institutions in Europe.

A team led by Matthew Ellis, MD, PhD, a breast cancer specialist with the Alvin J. Siteman Cancer Center at Washington University School of Medicine and Barnes-Jewish Hospital, developed and validated the PEPI score. Ellis asserts that predictive tools such as this are vital to breast cancer treatment and research.

"This is a groundbreaking approach to predicting outcomes for patients with hormone-receptor-positive breast cancer," says Ellis, the Anheuser-Busch Endowed Professor in Medical Oncology. "In essence, we are looking at how tumors respond to anti-estrogen therapy in the short term to predict how well patients will do in the long term."

The study was published in the September 23 online issue of the *Journal of the National Cancer Institute*.

### Four factors of the PEPI score

- size of the breast tumor
- whether cancer is present in nearby lymph nodes
- how fast tumor cells are multiplying
- whether tumors lose their estrogen receptors





**Poster project** DePorres Cormier II, a second-year medical student, explains the results of his summer research, "Managing Their Child's Asthma: Accessing the Healthcare System Among Low-Income, Inner-City Families," to John P. Atkinson, MD, the Samuel B. Grant Professor of Medicine and professor of molecular microbiology, at the Third Annual Research Training Symposium and Poster Session held on October 29 at the Farrell Learning and Teaching Center.

## Preventing infection in the ICU

Brushing the teeth of ICU patients who need a ventilator dramatically reduces cases of ventilator-associated pneumonia (VAP), according to a study done in the Barnes-Jewish Hospital surgical and trauma intensive care unit. VAP, a common, yet life-threatening hospital-acquired infection, affects up to 300,000 patients each year.

"The study clearly demonstrates the importance of regimented dental hygiene in reducing VAP in the ICU," says Timothy G. Buchman, MD, PhD, the Harry Edison Professor of Surgery, chief of acute and critical care surgery at

Washington University School of Medicine and Barnes-Jewish Hospital, and co-author of the study. "It also underscores how critical every aspect of the life-saving care is that nurses bring to patients every day."

The year-long study, led by Barnes-Jewish Hospital nurse specialists Lynn Schallom, RN, MSN, and Carrie Sona, RN,

MSN, in conjunction with Washington University physicians, is scheduled to be published in an upcoming issue of the *Journal of Intensive Care Medicine*.

In the study, nurses in the 24-bed unit found that they could cut the incidence of VAP almost in half by simply brushing patients' teeth twice a day and applying mouth-wash to the inside of the mouth. At the end of a year, Schallom and Sona found that the incidence of VAP had dropped from 24 cases to 10 cases, a drop of 46 percent.

Since the study was completed, the new dental hygiene regimen has been adopted for ventilator patients throughout Barnes-Jewish Hospital.

Twice-daily dental care for ICU patients has reduced cases of ventilator-assisted pneumonia by nearly 50 percent.

## Eliminating cancer disparities for minorities, disadvantaged

### Prevention, information to play key role

Disadvantaged and minority populations are more likely to be diagnosed with and die from cancer than other groups in the United States. A five-year, \$8.6 million grant to Washington University will explore how improved information and referral systems can help eliminate these disparities.

The grant, from the National Cancer Institute, was awarded to the Health Communication Research Laboratory (HCRL) at Washington University's Brown School of Social Work and the Alvin J. Siteman Cancer Center at Washington University School of Medicine and Barnes-Jewish Hospital. It establishes the HCRL as one of only five Centers of Excellence in Cancer Communication Research nationwide.

The grant will enable the HCRL to test communication strategies to enhance prevention, early detection and treatment of cancer in low-income populations. Real-world research will take place with local partners, including United Way of Greater St. Louis, Missouri

Department of Health and Senior Services, and Missouri Foundation for Health. The grant also supports research with the American Cancer Society to evaluate effects of a national cancer news service for minority-serving media.

"We know a lot about how to prevent cancer or detect it early, and many of these services are available for free to those with low income or no insurance," says Matthew W. Kreuter, PhD, principal investigator of the grant and director of the HCRL. "But we need to do a much better job connecting people to these services."

Kreuter also is a professor at the Brown School and holds an appointment at the School of Medicine. Additionally, he is a scholar at Washington University's Institute for Public Health.



## Emergency care added at BJWCH

Washington University faculty physicians have assumed responsibility for providing medical care in the Emergency Department at Barnes-Jewish West County Hospital. The addition of these physicians continues the enhancement of clinical services at Barnes-Jewish West County Hospital.

Randall A. Howell, DO, assistant professor of emergency medicine, assumed the role of medical director of the Barnes-Jewish West County Hospital Emergency Department. He has been a faculty member for 12 years and will supervise a team of 11 emergency medicine physicians.





ROBERT BUSTON

## Hands-on learning

Abby Buchwalter (standing, second from left), a doctoral student in cell biology and physiology, works with high school students (from left) Saliha Moore, Amiah Macon, Quansha Knox, Donita Hamilton and Amanda Jackson. The students participated in an experiment about reduction-oxidation reactions. They were visiting the School of Medicine for Women in Science Day, sponsored by the Young Scientist Program and the Association for Women in Science.

## CHOLESTEROL AND LIPID RESEARCH

# Filtering “bad” cholesterol can boost health

**D**iet and lifestyle changes, along with medication, can lower risk of heart attack and stroke in patients with high levels of low-density lipoprotein (LDL). But some patients who are genetically predisposed to high levels of LDL-cholesterol don't respond well to drug therapy.

Now School of Medicine physicians can help these patients with LDL apheresis, a treatment that uses an FDA-approved system known as HELP (Heparin-induced Extracorporeal Lipoprotein Precipitation) to filter LDL-cholesterol out of the blood.

“The blood is separated into red cells and plasma, and the plasma is run through a device containing material that grabs on to bad cholesterol particles,” says Anne Carol Goldberg, MD, associate professor of medicine. “It picks up the particles that contain a protein found on LDL-cholesterol and removes them from the blood. Then the plasma is put back together with the red blood cells, minus the LDL-cholesterol, and returned to the body.”

The therapy reduces LDL-cholesterol levels by at least 50 percent, according to Goldberg, a cholesterol specialist. Sometimes as much as three-fourths of a patient's LDL-cholesterol will be removed during treatment. Unfortunately, the bad cholesterol will begin to build up again in the days and weeks following treatment, so patients must receive treatment twice a month.

“High levels of cholesterol cause deposits to form inside blood vessels, and those deposits, called plaques, can narrow arteries and block blood flow,” Goldberg says. “It is a silent disease, and most people don't notice any symptoms until they suffer a heart attack or a stroke.”

The Center for Advanced Medicine at Washington University School of Medicine and Barnes-Jewish Hospital is one of only

a few dozen centers across the nation that offer LDL apheresis.

According to Goldberg, unlike kidney dialysis, which removes impurities from the blood of patients who have kidney failure, LDL apheresis is more like what happens when people donate platelets at a blood bank.

Anne Carol Goldberg, MD, associate professor of medicine, talks with patient Ted Harrison while he undergoes apheresis treatment for high cholesterol at Barnes-Jewish Hospital.



TIM PARKER





**Super PT heroes** Rachel Hannebaum (Leonardo Ninja Turtle) and Simon Hoehn (Venom), second-year students in the Program in Physical Therapy, take part in the clinical education lottery, in which students choose the locations for their three clinical rotations. Each year, students and the clinical education team dress up in costumes based on a theme; this year it was Superheroes and Villains. Seated are Cheryl A. Caldwell, DPT, left, assistant professor of physical therapy, and Tammy L. Burlis, DPT, assistant professor of physical therapy and associate director of clinical education.

## Rothbaum honored at Founders Day

Robert J. Rothbaum, MD, professor of pediatrics and clinical director of the Division of Pediatric Gastroenterology and Nutrition, was honored with a Distinguished Faculty Award at the university's annual Founders Day ceremony on November 8 at the America's Center in downtown St. Louis.



Robert J. Rothbaum, MD

Rothbaum, who earned his medical degree from the University of Chicago and then completed a pediatric residency and an ambulatory pediatrics fellowship at St. Louis Children's Hospital, has devoted his long career to the improvement of care for children. In this capacity, he oversees the clinical side of the outpatient office, the ambulatory procedure center and inpatient service.

His medical, analytical and administrative contributions range from developing the first sexual abuse diagnostic and management protocols to creating the first computer-based physician ordering system.

He also helped to create the pediatric parenteral nutrition web site and co-founded a system that brings together physicians, therapists, dietitians, nurses and psychologists to analyze nutrition challenges in children.

Rothbaum has been the recipient of the university's 25-Year Service Award, in 2001, and the 2007 Samuel Goldstein Teaching Award, the medical school's highest honor for educators.

## Multicenter clinical trial to study deep vein thrombosis

A \$10 million, multicenter clinical trial of an aggressive treatment for blood clots in the leg — known as deep vein thrombosis (DVT) — will be led by School of Medicine researchers.

About 250,000 U.S. patients are diagnosed with new DVTs every year. Current clinical standards call for the patients to be treated with blood-thinning agents, which prevent clot migration and formation of new clots but do not break up the original clot, which often leads to serious, difficult-to-treat, long-term complications.

Suresh Vedantham, MD, associate professor of radiology and of surgery, is the national principal investigator for the Acute Venous Thrombosis: Thrombus Removal with Adjunctive Catheter-Directed Thrombolysis (ATTRACT) Trial, which will test the use of catheter-mounted technology that can both chew up DVTs and directly administer clot-busting drugs. The trial is funded by the National Heart, Lung, and Blood Institute.

"This is the first large-scale test of these new techniques, and the potential to change clinical DVT practice on a large scale is very exciting," says Vedantham, an interventional radiologist at Barnes-Jewish Hospital. "If the trial is positive, it will alter the paradigm to say we don't just prevent the next clot, we've got to also remove the existing clot first."

Initial symptoms of DVT are pain and swelling in the affected leg. Associated risk factors include surgery or trauma to the leg, genetic factors, immobilization, hormonal therapies and cancer. The study's overall goal is to provide a safer, quicker and more effective approach to treatment.



**Medical women** Faculty discuss issues at the Spotlight on Women in Medicine and Science (SWIMS) symposium and panel held September 26 at the Farrell Learning and Teaching Center. From left: Angela M. Sharkey, MD, professor of pediatrics; Tamara G. Hershey, PhD, associate professor of psychiatry, neurology and radiology; Jeanne M. Nerbonne, PhD, Alumni Endowed Professor of Developmental Biology; Susan E. Mackinnon, MD, the Sydney M., Jr. and Robert H. Shoenberg Professor of Surgery and chair of the Division of Plastic and Reconstructive Surgery; and Diana L. Gray, MD, associate dean for faculty affairs and professor of obstetrics and gynecology.



## Signs of the times

New signage for the University Eye Center and the Siteman Cancer Center at Barnes-Jewish West County Hospital (BJWCH) marks recent changes in the ongoing expansion of patient care services on that campus. The School of Medicine's \$7.5 million project has doubled the size of its clinical presence at BJWCH to provide St. Louis County residents greater access to more physicians and additional treatments and therapies. Among the clinical offerings now available are the full range of adult and pediatric medical specialists, selected surgery services and a major expansion of the Siteman Cancer Center. For more information, please visit [www.sitemanwestcounty.wustl.edu](http://www.sitemanwestcounty.wustl.edu) and record. [wustl.edu/news/page/normal/11330.html](http://wustl.edu/news/page/normal/11330.html).



## DEVELOPMENTAL BIOLOGY

# Is smell deprivation the path to longevity?

**M**any animals live longer when raised on low-calorie diets. Now School of Medicine researchers have shown they can extend the life spans of roundworms even when the worms are well fed. It just takes a chemical that blocks their sense of smell.

Three years ago, the researchers, led by Kerry Kornfeld, MD, PhD, reported that a class of anticonvulsant medications made the roundworm *Caenorhabditis elegans* live longer. But until now, they didn't quite know what the drugs did to give the worms their longevity. They reported their latest findings in the October 24 issue of the *Public Library of Science Genetics*.

"We've learned that the drugs inhibit neurons in the worm's head that sense chemicals in their surroundings; the neurons are like the worm's nose," says Kornfeld, professor of developmental biology. "Like roundworms that are grown in a food-scarce environment, the worms exposed to the anticonvulsant ethosuximide lived

longer. But these worms ate plenty of food. That suggests that the worms' sensation of food is critical to controlling their metabolism and life span."

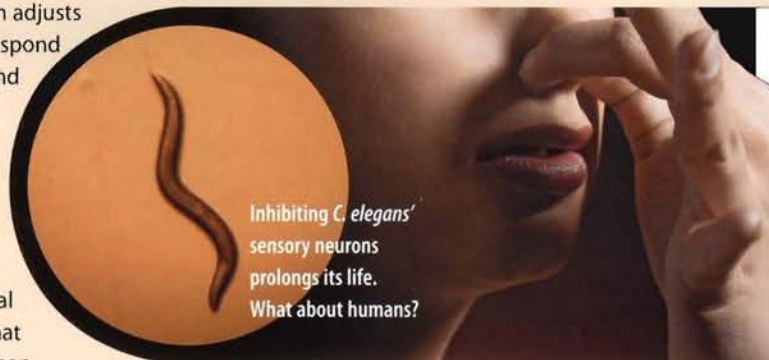
If roundworms sense that food is abundant, their metabolism adjusts accordingly. Their bodies respond to promote rapid growth and aging. When the worms sense a shortage of food, they make "metabolic decisions" to delay growth and energy use and to extend their life spans.

Kornfeld's long-term goal is to identify compounds that could potentially delay human aging. The research group also included James Collins, PhD, Kim Evason, MD, PhD, Chris Pickett, PhD, and Daniel Schneider.

The scientists' strategy has been to expose the roundworms to libraries of chemicals to identify compounds that delay aging and extend their lives. That led to the

unexpected result that some human anti-convulsants slow aging in *C. elegans*.

The researchers found that roundworms treated with ethosuximide lived up to 29 percent longer.



Inhibiting *C. elegans*' sensory neurons prolongs its life. What about humans?

"Now we know what cells ethosuximide targets," Kornfeld says. "It's likely the drug prevents nerve cells from being electrically active, but precisely how is something we need to study further. We also want to find out how the effect on the neurons is translated to the worms' bodies to delay aging."





# Best Practices



## Washington University Physicians

Washington University School of Medicine in St. Louis

**Offering compassionate care, continual quality improvement, and a collaborative environment that puts patient needs first.**

AN EMBROIDERED GOLD INSIGNIA symbolizes the clinical care arm of the School of Medicine, now the third-largest academically affiliated practice plan in the nation, with nearly 1,200 physicians representing more than 65 subspecialties, providing world-class comprehensive care to nearly 200,000 adults and children each year.

So distinguished are its members that *Best Doctors In America, 2008* lists more than 300 Washington University Physicians — almost three times more than any other group in St. Louis and more than any other physicians' group in the Midwest.

"I can't say enough about the School of Medicine and the Center for Advanced Medicine," says patient Tom Mouser. Diagnosed with Stage 4 oral cancer just over a year ago, Mouser, 61, says what could have been a grim experience turned into one of hope, thanks to the efforts of medical providers like Brian Nussenbaum, MD, associate professor of otolaryngology, and clinical nurse coordinator Diane M. Athmer, RN, CORLN. "They were wonderful — absolutely professional, positively upbeat."

Today, Mouser is cancer-free. "They told me I was going to be fine and lead a normal life. And they were right."

Stories like this exemplify the dedication to patient care that makes Washington University Physicians an outstanding health care provider.



BY HOLLY EDMISTON AND ERIC YOUNG





Washington University Physicians: Highly trained, well-versed in current research, extensively networked with leading specialists and researchers.

## A plan for the 21st century

Although the School of Medicine's faculty have long provided clinical care, the group's cohesive identity as Washington University Physicians came late in its history.

The School's clinical departments had been independently managed, resulting in administrative redundancies, missed opportunities for synergy, and an uneven experience for patients. Those seeing multiple specialists received separate bills from each department, and surveys showed that patients often did not realize their appointments were with faculty physicians of Washington University School of Medicine — until they received their bills.

Then, in the 1990s, the clinical department heads agreed that they, and their patients, could benefit from greater coordination of care and a stronger public identity for the School's clinical practice. At the same time, the physicians' health care reimbursements were eroding due to the growth of managed care plans and a reduction in government support. The National Institutes of Health leveled its research funding, making clinical revenue even more important to the School's overall financial health. To address these challenges, the clinical department heads developed an integrated Faculty Practice Plan.

Patients would later know it as Washington University Physicians.

**The plan allowed faculty practice to become efficient, strategic, and more responsive to the needs of patients, referring physicians and health care insurers.**

The goals of this new effort were to ensure that the School of Medicine's clinical practice recognized and seized opportunities to become efficient, strategic, and even more responsive to the needs of patients, referring physicians and health care insurers.

According to James P. Crane, MD, associate vice chancellor for clinical affairs and chief executive officer of the Faculty Practice Plan, "WU Physicians allowed the School of Medicine to thrive in an increasingly competitive health care market. And, as a robust multispecialty practice, it provided a clinically diverse patient base in support of the School's teaching and research missions."

WU Physicians now serves as the nexus for charting strategic direction and coordinating clinical activities across the School's 14 clinical departments, establishing school-wide clinical practice standards and policies, enhancing patient safety, providing key administrative services and infrastructure, and advocating public health policy of benefit to the local community and beyond.

Although most of the School's patients live in the St. Louis area, many visit from outstate Missouri and Illinois. Still others come from around the world because of the renowned quality of care found here. The practice is well-known for its outstanding outcomes — examples include a high rate of organ transplant success and skillful management of congestive heart failure.



Only a small percentage of WU Physicians practice primary care. Most of its members provide subspecialty care, seeing patients who are referred by physicians in community practice.

"It's really important that we don't lose sight of where patients come from and their connection back to their primary care physicians," says Crane. "In some cases, patients are referred by their primary care physician. In other instances, the referral source may be a community specialist. When a patient comes to see us, we work hard to document and communicate with both the referring physician and the patient's primary care provider."

This can sometimes be challenging, especially if a patient is acutely ill and transferred to the Medical Center from another facility. In cases like these, full and timely communication is even more important to ensure continuity of care following hospital discharge, Crane says.

"We are partners in caring for their patients," says Crane of primary care and referring physicians. "It is important that we coordinate the care patients receive across the continuum of providers."

## The science of medicine

"Washington University provides a highly collaborative environment where physicians and scientists work side by side," says R. Gilbert Jost, MD, current chair of the WU Physicians board of directors and head of the Mallinckrodt Institute of Radiology. "Consequently, some of the best physicians in the world are in a position to offer the latest developments in medical science to our patients."

Translating today's science into tomorrow's medicine is what BioMed21, the School of Medicine's multidisciplinary research imperative, is all about. By bringing together basic scientists and clinician-researchers from many different disciplines, the School can better address some of the biggest questions about disease: its origin, how it affects us as human beings, and how it can be cured.

"Our clinical practice provides an essential platform for bringing new discoveries and the latest medical innovations to the bedside," says Larry J. Shapiro, MD, executive vice chancellor for medical affairs and dean of the School of Medicine.

"It also provides a vital training ground for the next generation of health care professionals," says Shapiro. "The strength of our clinical practice and of our affiliated hospitals — Barnes-Jewish and St. Louis Children's — and the quality of our clinical instruction, are leading reasons why we attract the highest-ranking medical students and top residents."

In addition to scientific advancements, WU Physicians continually strive to enhance all aspects of the patient care experience. But measurement of health care quality is an evolving science. Although hard quantitative data — such as outcome statistics — tell much of the story, "softer" qualitative data can be equally important in guiding improvements. One such qualitative measure is patient feedback.

Patients are randomly surveyed to rate their experience on 16 dimensions of care, including the respect and compassion shown by WU Physicians and staff, the thoroughness and communication skills of their provider, and how well the patient's health concerns are addressed.

## Stages of care provided by Washington University Physicians

*Margaret, age 53, visits her doctor and complains of lethargy, discomfort and shortness of breath.*

<b>1</b> Primary Care	<b>First contact with the patient</b>	<i>Margaret's primary care doctor is concerned about the severity of her symptoms and refers her to a Washington University Physician at Barnes-Jewish Hospital for an in-depth assessment.</i>
<b>2</b> Secondary Care	<b>Medical specialists</b>	<i>A cardiologist rules out heart problems but suspects pulmonary disease. Margaret is referred to a tertiary provider — this time, a pulmonary specialist — for a conclusive assessment.</i>
<b>3</b> Tertiary Care	<b>Specialized consults, diagnostics, treatments</b>	<i>This pulmonologist confirms that Margaret is experiencing a significant decrease in pulmonary function. Diagnosis: advanced Chronic Obstructive Pulmonary Disease — emphysema.</i>
<b>4</b> Quaternary Care	<b>Advanced medicine, highly specialized, research-oriented</b>	<i>Next, a thoracic surgeon considers whether a lung volume reduction surgery would relieve Margaret's symptoms. Instead, given her condition, it is recommended that she consider participating in a clinical research trial for a new treatment modality.</i>



# Patients respond

Patient feedback — whether it be a compliment, suggestion or complaint — is taken very seriously by the medical professionals who make up WU Physicians. An elaborate system ensures that concerns are addressed and resolved in a timely manner. The vast majority of patients report excellent care experiences, testaments to the overall quality of care.



## **"I thought he would die"**

Ronda Bryer's 10-year-old son, Johnwesley, suffered an open head injury in a car accident. Flown to St. Louis Children's Hospital by helicopter, he underwent surgeries performed by neurosurgeon Matthew D. Smyth, MD, and plastic surgeon Albert S. Woo, MD. Today, the 7th grader is making As and Bs in school, and he returns regularly to St. Louis for follow-up care. Bryer says she's come to consider the hospital as an oasis, another home, during the time she and her family spend here. "I can't say enough about everybody, on every level. They care for the whole family's needs, especially emotionally. I'm confident that if I show up with my child, he will get the best of care," says Bryer.

## **"Life is so much easier"**

A U.S. Navy gunnery officer in World War II, Ed Cunliff made his first visit to an audiologist in 1955; he was advised to study lipreading. By the time he decided to get a cochlear implant earlier this year, he had almost no hearing left. "It's a night-and-day difference," says Cunliff of his hearing following the cochlear implant. He calls J. Gail Neely, MD, professor of otolaryngology, and his staff "terrific." He especially credits the work of audiologists Susan Binzer and Laura Holden, who experimented with 37 software settings over 13 weeks until they were satisfied with the quality of his implant. "Those two made me hear again," says Cunliff.

## **"I was at my wit's end"**

Few and far between — that's how Judy Kohlberg, 55, describes her "good" days before being treated by Joel A. Goebel, MD, FACS, professor of otolaryngology and director of the Dizziness and Balance Center at Washington University School of Medicine. Kohlberg suffered from chronic vertigo for 18 months before being diagnosed by Goebel at the end of an exhaustive three-hour appointment. She quickly found relief with the medication he prescribed; within four days, her vertigo was gone. "I was grateful for such good care," says Kohlberg. "I think Dr. Goebel is the best ever."

## **"We're both going to have to fight"**

Those words were the first Christine Crews, 48, heard after receiving an AIDS diagnosis. Spoken by Michael A. Lane, MD, a fellow in the Division of Infectious Diseases, they meant the world to her, letting her know she was not alone. She is also grateful for the care of E.P. Barrette, MD, associate professor of medicine, nurse practitioner Iver Gandy, and case manager Andrea D. Armstead, RN, BSN. Everyone in the division, she says, worked with Crews and her family, particularly her 13-year-old daughter, to answer their questions about AIDS. "It's not easy to put your life in someone else's hands," says Crews, the mother of four and grandmother of eight, "but I have faith in them — those people saved my life."



**MARKING INSTRUCTIONS**

- Use black or blue pen or a number 2 pencil.
- Make dark marks that fill the circle completely.
- Do not use pen with ink that works through the paper.
- Do not use eraser.
- Please complete BOTH SIDES.

**Dear Patient:**

At Washington University School of Medicine, we want to provide you with the highest quality of service. To help us accomplish this goal, please take a few moments to complete this questionnaire about your experience with our physicians and staff. Your responses and comments are very important to us and will be used to help us continually improve the care we deliver to you and other patients. Thanks for taking a few moments to share your opinion.

**1. The overall quality of care and service received:**

**2. Getting through to the office by telephone:**

**3. The personal manner (courtesy, respect, sensitivity and friendliness) of person handling your phone calls:**

**4. The ease with which your appointment was scheduled:**

**5. The availability of appointment times to meet your health care needs:**

**6. The quality of directions you were given by our staff prior to your visit:**

**7. The availability of enough, convenient parking:**

**8. The quality of signage and personnel available to assist you in finding your way:**

**9. The office wait:**

**10. Approximately how many minutes did you wait in the office past your scheduled appointment time?**

**11. If you experienced a delay, was a clear and complete explanation provided about the delay?**

**12. The personal manner (courtesy, respect, sensitivity, and friendliness) of the office staff:**

OVER →

### GUIDING STAR

**Outstanding Clinical Staff Member in Support of the School's Clinical Mission**



#### Department of Medicine

James P. Crane, MD, recognizes medical assistant Matia D. Bryant from the Alvin J. Siteman Cancer Center Treatment Center, as the 2008 Guiding Star for outstanding professionalism and humanity.

### GALAXY AWARD

**Highest Patient Satisfaction Scores for a Large Clinical Practice Site**



#### Pediatric Multispecialty Center in West County

Nurse manager Barbara Faszl, RN, left, and Abby S. Hollander, MD, medical director, accept the Galaxy Award — for the fourth year in a row — from R. Gilbert Jost, MD.

**Bringing the mission to life** An annual ceremony celebrates physicians and staff who go the extra mile for patients. Their motto? "Never underestimate the difference you can make in the patient's experience."

Questionnaires are sent to patients to evaluate their perceptions of medical care.

"Clear communication is vital," says Crane, speaking as an experienced clinician who still sees patients in addition to his administrative role. "If patients don't understand their illness or the recommended treatment, it's less likely they're going to be compliant and have a better outcome and healthier life."

Nearly 34,000 patients were surveyed last year, says Kelley A. Mullen, RN, senior director of clinical operations. Mullen's staff monitors all responses and follows up when warranted. In addition to responding to survey questions, many patients comment on the outstanding care they receive and praise individual members of the health care team for their compassion, assistance and reassurance amidst an otherwise stressful time in their lives.

Survey data are compiled and sent to physicians and clinical support staff, business managers, division chiefs and department heads. Individual faculty physicians are given information on how well they compare to their peers within a subspecialty in seven key areas, including communication skills and overall patient satisfaction.

"Our mission is to improve the health of people in the community through excellence in patient care and medical discovery," says Stephanie A. Weisenborn, RN, service quality coordinator. "It's not just a lofty statement; we live and breathe it every day."

To foster a service culture, WU Physicians offers ongoing customer service classes, as well as "service boosters" if a practice notes a particular trend on which they need to focus.

"Our goal is to create an ideal care experience and to 'exceed' patient expectations," says Crane. "Our faculty physicians and the clinical support staff are incredibly dedicated to their patients and strive for continual improvement. Patient feedback and benchmark information are important gauges of how well we are doing. Our patient advocacy scores are best-in-class and show consistent and statistically significant improvement every year."

While patient perception of WU Physicians is crucial, having an effective business model is also essential to success.

"There are always opportunities to improve the efficiency and quality of patient care," says Crane. "For example, we have put in place sophisticated information systems to reduce costs and ensure more consistent revenue flow. We also have invested several million dollars

developing an integrated electronic medical record system for our patients. This technology enhances the quality of care we provide, reduces the risk of medical errors, improves faculty and staff productivity, and facilitates timely communication with referring physicians."

Electronic medical records allow physicians to track and monitor outcomes and to establish best practices.

### WUPhysicians.wustl.edu

**To find a Washington University Physician at Barnes-Jewish Hospital, call 314-TOP-DOCS (314) 867-3627 or toll-free (866) 867-3627.**

**For pediatric care, contact St. Louis Children's Hospital at (314) 454-KIDS (5437) or toll-free (800) 678-5437.**



## CONVENIENCE & ACCESSIBILITY

"For certain chronic diseases, such as diabetes or heart disease, there's good evidence in the peer-reviewed literature as to what is the best way of managing those conditions," says Crane. "The ability to retrieve and analyze clinical data from our electronic medical record system is an important quality assurance tool and ensures that we are consistently practicing evidence-based medicine and optimizing patient care."

### Facing the challenges ahead

Economic realities are reshaping the health care landscape.

Changes in Medicaid and employer-sponsored insurance benefits mean less coverage, especially for the most vulnerable populations in the community. Crane worries about the ability of those groups to obtain proper care.

"We have about 350,000 people in St. Louis city and county who either are uninsured or underinsured," Crane says, "and that number is growing. The majority of unin-

sured people in the city and county have jobs; they just don't have jobs that come with health insurance. That's a worry for us, not just for the faculty practice and the School of Medicine, but for the community as a whole."

Even people who have insurance now pay higher out-of-pocket expenses, which can lead to them delaying care, particularly preventive care measures.

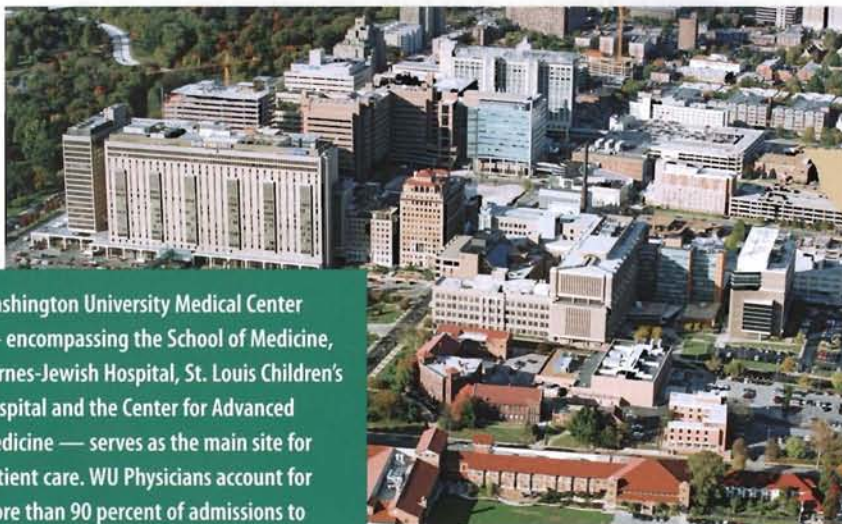
"The earlier you can prevent and diagnose disease, the more you can do to preserve health status and ensure better health outcomes," says Crane. "Prevention also results in lower health care costs, by reducing the high expense of treating advanced disease."

For the faculty and staff who make up WU Physicians, the main focus is and will remain the patients. "I want people to know how committed and passionate our faculty and support staff are," Crane says. "We are fortunate to have such talented people here who are dedicated to providing world-class care. It's not just their job. It's their mission." □

At Washington University Medical Center, adult outpatients receive coordinated, multidisciplinary care in the Center for Advanced Medicine (CAM). This 14-story facility includes physician offices, diagnostic services and a surgery center where more than 750 Washington University physicians practice their expertise in 43 medical and surgical subspecialties. The CAM is also home to the Alvin J. Siteman Cancer Center,

### Built from the ground up for patient-centered care

Missouri's only National Cancer Institute-designated Cancer Center and a national resource for all types of cancer treatment. The integration of these clinical programs into a single building has transformed the delivery of health care, providing convenient, "one-stop shopping" for patients and fostering innovative, world-class care.



Washington University Medical Center — encompassing the School of Medicine, Barnes-Jewish Hospital, St. Louis Children's Hospital and the Center for Advanced Medicine — serves as the main site for patient care. WU Physicians account for more than 90 percent of admissions to the hospitals.

WU Physicians serve 35 locations in the St. Louis area and seven in outstate Missouri.

MISSOURI

ST. LOUIS



# the safest **SPOT** in St. Louis



Staff members Lisa C. Isenberg, RN, and Sergio K. Buchanan, youth development specialist, demonstrate a checkup in an examination room at SPOT (Supporting Positive Opportunities with Teens).

If only there was a place  
dedicated to helping youth  
at risk for STDs and HIV.

If only...

BY BETH MILLER





The SPOT's Youth Advisory Committee, clockwise from left: Markysha Marks, Lauren Periasamy, Chelsie Smith, Amelia Cashen, Sarah Castaneda and Ebony Marks.

**In the last 10 years**, the St. Louis area has seen an alarming increase in new diagnoses of HIV and sexually transmitted infections among 13- to 24-year-olds. Of the new diagnoses of HIV each year, 30 percent are among adolescents and young adults, who are often disconnected from the health care system or support services. Nationwide, St. Louis has among the highest rates of sexually transmitted diseases in this age group. To head off this trend, Project ARK (AIDS/HIV Resources and Knowledge) and the Adolescent Center in the Department of Pediatrics, in collaboration with community partners, have launched the SPOT (Supporting Positive Opportunities with Teens), aimed specifically at the 13 to 24 age group.

The SPOT is a one-stop, drop-in center for youth that provides testing for HIV and sexually transmitted diseases, health care and counseling, social support, prevention and case management services from School of Medicine physicians and staff — all at no cost.

"This is a public health epidemic that we have to address," says Katie L. Plax, MD, medical director for the SPOT, assistant professor of pediatrics, and director of the Adolescent Center. "Leaving it unchecked means rates of sexually transmitted diseases and HIV will continue to climb. With cuts to Medicaid and the economy getting worse, it's not surprising this epidemic is on the rise; young people have fewer places to turn."

Kimberly Donica, program director of Project ARK, says the SPOT's mission is to dramatically reduce the number of infected youth. "We also want to prevent repeat sexually transmitted diseases and reach their partners to prevent future infections," Donica says.

The SPOT opened in mid-September at 4169 Laclede Ave. after more than a year of planning. The colorful and modern drop-in center has a

living room with cozy furniture, a flat-screen TV, computers, offices for physicians and staff, exam rooms, a kitchenette, shower and laundry facilities. The staff wants it to be a welcoming place where young people will feel comfortable.

"We are excited to get the message to teens that this is a safe space," says Regina M. Whittington, program director of the SPOT. "We hope to provide a place that will establish regular health care for them as they transition into young adults."

In its first few months of operation, the drop-in center was averaging up to 15 clients a day. When youth come into SPOT, they are asked only their name, birth date and what they need that day.

"If they just want a shower or to use the computer to check e-mail, that's fine," Whittington says. "We don't want anyone to feel threatened. We want to be a drop-in, low-threshold, high-engagement center. We hope that once they are in, they realize that the people who work here are cool and that they can talk to us. When that conversation begins, we can find out what they need, whether it is an HIV test, an STD test or a GED."

Whittington came to the SPOT from the St. Louis County Health Department, one of the community partners involved in the project. The rest of the SPOT staff includes physicians, nurses, social workers, case managers, health educators, counselors and a psychiatrist.

Gregory A. Storch, MD, the Ruth L. Siteman Professor of Pediatrics, director of the Division of Infectious Diseases in the Department of Pediatrics, and medical director of Project ARK, says the SPOT is one of the most exciting programs he's ever seen.

"We've realized over the last few years from what we're seeing in the pediatric HIV clinic that



Kelly Krahl, left, an epidemiologist with the City of St. Louis Department of Health, Lawrence Lewis, drop-in coordinator for the SPOT, Regina Whittington, program director of the SPOT, and Brandii Mayes with the City of St. Louis Department of Health chat at the SPOT's Open House for its community partners.





Regina M. Whittington, the SPOT's program director, speaks to community leaders during the Open House held on October 8.

there is a tremendous need for increased efforts for prevention," Storch says. "We view the current HIV/STD situation in St. Louis as a community crisis. This is one way to respond to that crisis."

Prior to the SPOT's opening, many of these youth sought health care from an emergency room or did not seek care at all, Storch says.

"We are looking for the disenfranchised youth who are disconnected because of barriers or perceived barriers to the health care system," Donica says. "Many times youth don't realize that they can get services at a low cost. We will try to address these barriers and connect them into the system to prevent future infections. If a patient comes in with an STD or symptoms, we don't want anything to prevent care."

The SPOT offers rapid HIV tests, which provide results in about 20 minutes, and is open weekday afternoons for testing, medical care, counseling and other services. It was modeled after the Broadway Youth Center in Chicago.

A youth advisory committee (YAC) — comprised of interested youth, Project ARK clients and volunteers — was instrumental in the program's design, Whittington says. "Everything here has a youth touch, from the paint to the carpet to the marketing and the services we offer," she says. "The group helped with the design of the space and told us they wanted a 'homey' feel, which included having access to food and a kitchen area. Now they feel a real sense of ownership and want to be here because they designed it."

Whittington says the youth had three main requests of the SPOT: job training, mental health services and health care services. They also are involved in the leadership of the programs offered at the SPOT and even helped hire the staff.

Ebony Marks, a sophomore at Belleville West High School, says that being part of YAC has had a maturing effect on her and fellow committee members. "Being a teenager, you think you know about everything already, but being a part of the meetings here, I realized I didn't," she says.

Amelia Cashen, a senior at Rosati-Kain High School, was a volunteer at Project ARK before joining the group. "Being involved in YAC gives me a real sense of accomplishment and has opened a lot of opportunities," she says.

In one instance, Cashen and two SPOT staff members spoke to a School of Medicine class about ways to present safer sex practices. "I never expected to be a part of that," she says. "I really feel like I have a place in the community."

Among the university disciplines contributing services to the SPOT are the Department of Pediatrics' Adolescent Center and its Division of Pediatric Infectious Diseases and the Department of Medicine's Division of Adult Infectious Diseases. The SPOT also benefits from the services of Jeffrey F. Peipert, MD, PhD, the Robert J. Terry Professor of Obstetrics and Gynecology and principal investigator of the Contraceptive Choice Project, which offers contraception at no cost; Denise M. Willers, MD, assistant professor of obstetrics and gynecology, and Daniel T. Mamah, MD, instructor of psychiatry.

**Supporting the project** financially are the Barnes-Jewish Hospital Foundation and St. Louis Children's Hospital Foundation, BJC HealthCare, the MAC AIDS Fund, City of St. Louis and Missouri Foundation for Health, which provided a three-year, \$870,000 grant. The Substance Abuse and Mental Health Services Administration has awarded a grant that will allow SPOT to provide substance abuse and mental health services.

The SPOT will rely on a variety of community partnerships for clients and services, including Youth in Need, Epworth Children and Family Services, Planned Parenthood/St. Louis Region, St. Louis Area National Council on Alcoholism and Drug Abuse, St. Louis Agency on Training and Employment, and the St. Louis County, City of St. Louis and Missouri Departments of Health.

"Our community has really built this program, with the university taking a role in public health," Donica says.

Social worker Lawrence Lewis, drop-in program coordinator for the SPOT, says the project is different from anything else available in St. Louis.

"We are making the commitment to foster the interdependence between childhood and adulthood and to help these youth develop the skills needed to be successful as adults," Lewis says. "We can't afford to let young people experiment without guidance." □



Katie L. Plax, MD, assistant professor of pediatrics and the SPOT's medical director, talks with mental health specialist Adam T. Kepka.







# The 4 Seasons in Forest Park

PHOTO ESSAY BY

ROBERT BOSTON













# The 4 Seasons in Forest Park



**S**TUDENTS, FACULTY AND STAFF of the School of Medicine enjoy Forest Park for its natural beauty, recreational opportunities and cultural institutions. Located centrally to the St. Louis region, and midway between the Danforth Campus and Washington University Medical Center, this nearby oasis offers one of the finer reasons that make St. Louis a great place to live, work and study. During the past two years, staff photographer Robert Boston explored the park through his lens, watching the people who enjoy its many attractions.









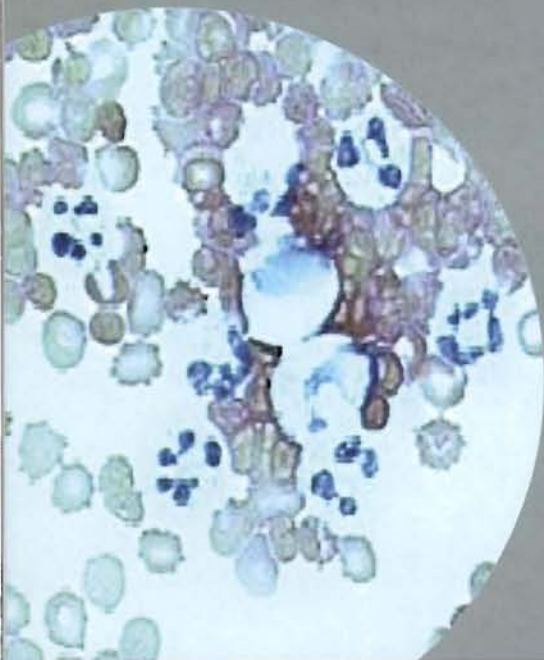
# Simply silver

**INTUBATION** is relatively common; unfortunately, so too are infections.

Now, researchers have taken a shine to a straightforward ounce of prevention.

BY GWEN ERICSON

Cells from the lungs of a patient with ventilator-associated pneumonia. White blood cells (large cells with blue nuclei) in the sample suggest infection. Later tests showed that the sample included bacteria called *Klebsiella* — some strains of which have become antibiotic resistant.



**Sometimes the simplest solutions are the best.**

Doctors and nurses try many things to keep pneumonia from striking critically ill patients on artificial ventilation. They rinse patients' mouths with antiseptics. They elevate the heads of their beds to help keep air passages clear. They purge ventilator circuits of collected fluids. They take care that patients don't regurgitate stomach contents. They diligently wash their hands.

But pulmonary specialist Marin H. Kollef, MD, and colleagues tried a different approach. Working with a device manufacturer, they armed breathing tubes used during ventilation against pathogens by coating them with antimicrobial silver.

In a recent study, they showed an almost 50 percent reduction in ventilator-associated pneumonia as a result. That could save a lot of lives and lessen the physical and financial burden of lung infection — all without giving extra duties to busy medical staff members.





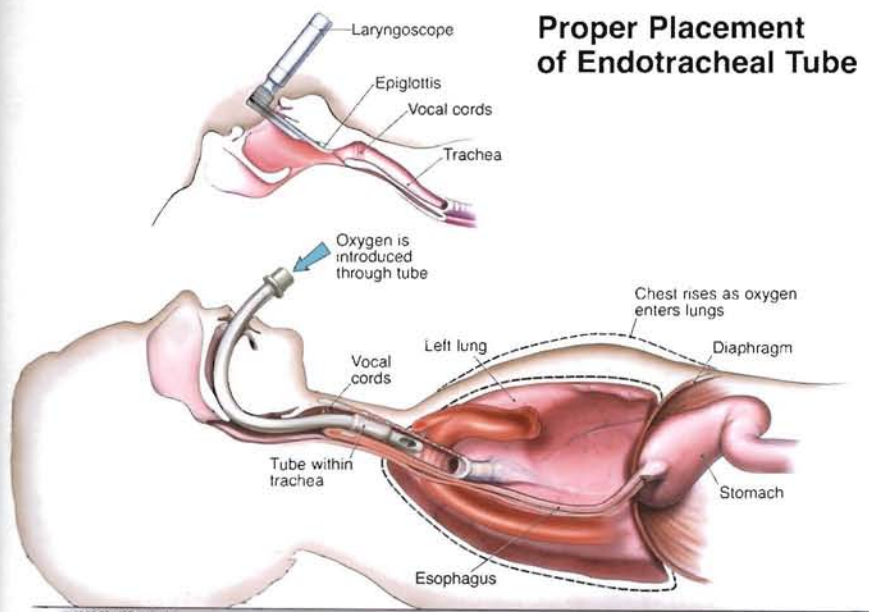
PHOTO ILLUSTRATION BY JILLIAN BOSTON AND TINA YOUNG



Traditional intubations increase the risk of infection for critically ill and severely injured patients. Research by Marin H. Kollef, MD, and colleagues, shows that use of silver-coated tubes dramatically drops infection rates.



## Proper Placement of Endotracheal Tube



Artificial ventilation requires tracheal intubation — insertion of an endotracheal tube into the windpipe. Patients needing long-term intubation (more than a day) include those in intensive care units after a cardiac arrest, trauma or emergency operations, or patients who have an exacerbation of their emphysema, asthma or cystic fibrosis.

The endotracheal tube goes through the mouth and vocal cords and into the windpipe, or trachea, which leads to the lungs. It ensures that patients can get air, and it can be attached to a mechanical ventilator when necessary.

Unfortunately, long-term tracheal intubation often leads to pneumonia. When tubes are placed in an emergency situation, it's common for microbes to be introduced into the lung. Also, intubation interferes with coughing and with the ability of airways to naturally sweep out particles. It also can injure the trachea lining. All that can give pathogens a direct conduit to the lungs.

Ventilator-associated pneumonia occurs in up to two of every 10 patients who are mechanically ventilated for more than 48 hours, according to a recent analysis. It causes excess expense along with substantial suffering and death. Hospital stays can double in length, and on average more than \$40,000 extra is spent for ventilated patients who contract pneumonia. Some experts estimate that up to two fifths of patients with ventilator-associated pneumonia will die.

Hospitals routinely institute a suite of procedures aimed at preventing any harmful microbes that might be in patients' mouths and gastrointestinal tract, in the air, on equipment or on caregivers' hands from getting in the breathing tubes.

"The problem is that it can be very difficult to maintain many of the preventative interventions 24 hours a day for critically ill patients," says Kollef, professor of medicine in the Division of Pulmonary and Critical Care Medicine. "And even though we use such techniques and keep our rates as low as we can, infections still happen."

So Kollef and colleagues approached medical device manufacturer C.R. Bard Inc. to suggest working together on a way to reduce ventilator-associated pneumonia.

The result of their collaboration — an endotracheal tube that's basically immune to pathogens. It's coated inside and outside with a polymer containing silver ions. Silver ions kill many kinds of bacteria, viruses and yeasts, and silver is garnering more interest lately because some microorganisms have developed resistance to standard antibiotics.

Antimicrobial silver can now be found in a wide range of applications such as surfaces and equipment used in food processing, bandages and ointments for wounds, washing machines that release silver into the wash water and even silver-coated computer mice and keyboards.

"Silver particles diffuse out of the coating of the endotracheal tubes to the surface environment," Kollef explains. "That creates zones of inhibition where microbes are killed. The silver also helps prevent formation of biofilms, which colonies of microorganisms build to protect themselves. And some of the silver probably makes its way into the lung where it could also have an antibiotic effect."

The silver-coated endotracheal tube is structurally identical to a typical tube, so its adoption would not require any change in standard intubation procedures.

Early tests showed that in both animals and humans the silver-coated tubes were safe. In animal tests, the tubes decreased the number of bacteria in airways of the lung and reduced pneumonia and lung injury. The tubes lessened the amount of bacterial growth in patient's lungs and didn't increase the amount of silver in the blood.

With such evidence in hand, Kollef and his colleagues devised a large, randomized multicenter clinical trial, the North American Silver-Coated Endotracheal Tube Study (NASCENT), which investigated whether the tubes would reduce ventilator-associated pneumonia in patients who needed mechanical ventilation for 24 hours or longer. The study included researchers from 11 centers around the United States and one in Germany.



A purple cap distinguishes the frosted tube with the silver coating — nearly invisible but critical for preventing infections.





**36%**  
fewer infections  
for all intubated  
patients

**48%**  
fewer infections  
within the first 10  
days of intubation

#### NO SILVER LINING

Without the silver coating, intubation may become the precursor to infection. This 64-year-old patient contracted a bacterial infection of the lungs while hospitalized; the cloudy areas indicate pneumonia. Antibiotics didn't help; eventually, the patient's kidneys failed.

The silver-coated tubes reduced cases of ventilator-associated pneumonia by 48 percent in patients intubated for more than 24 hours and less than 10 days. Generally, three-fourths of patients have their endotracheal tubes removed before 10 days. In patients who needed endotracheal tubes for longer than 10 days, the reduction was 36 percent.

The study also showed that in patients with silver-coated tubes, fewer cases of pneumonia were caused by highly drug-resistant bacteria, including methicillin-resistant *Staphylococcus aureus* (MRSA), which is unsusceptible to broad-spectrum antibiotics.

"Ventilator-associated pneumonia is often caused by antibiotic-resistant pathogens," Kollef says. "These pathogens are becoming increasingly common in hospitals. It's a big problem; we are facing infections for which we have no good treatments." And, even when an infection can be treated with antibiotics, it takes a physical toll on the patient.

Silver kills microorganisms by binding to the proteins and genetic material so that the pathogen can't function or reproduce. Microbes very rarely, if ever, acquire resistance to silver. Furthermore, silver has no side effects in people, and allergic reactions to the metal are rare.

The silver-coated tubes will be more expensive than uncoated tubes — costing around \$80 compared to \$2 — but that cost is easily recovered if the silver-coated tubes can reduce the number of cases of pneumonia, Kollef points out.

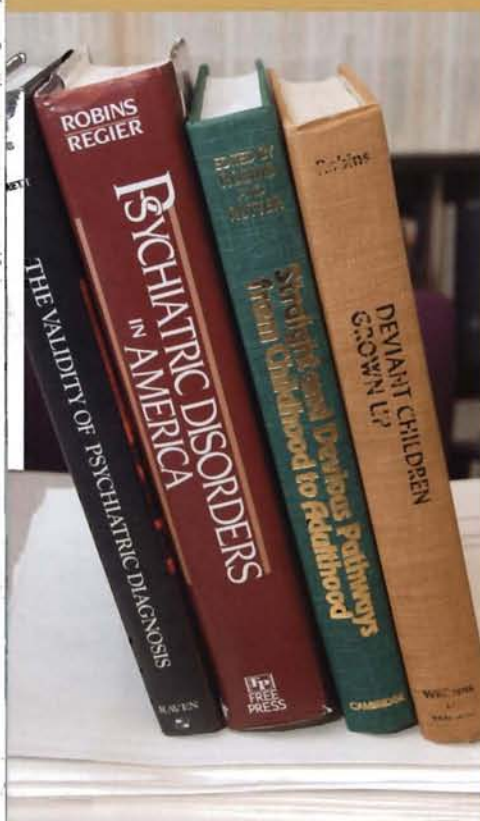
"This is the beginning of a new era of technologies to prevent microbial biofilms and infections," Kollef says. And other advances are on the horizon.

"The silver-polymer coating will most likely be applied to tracheostomy tubes as well, and the tubes will also become available for use in pediatric medicine. In the future, we are going to see other types of coatings for other purposes used in devices that come in contact with the body." □



# ONE of the GIANTS

The name of psychiatric epidemiology pioneer Lee Robins, PhD, is still invoked today as one who understood that good answers come from asking careful questions.

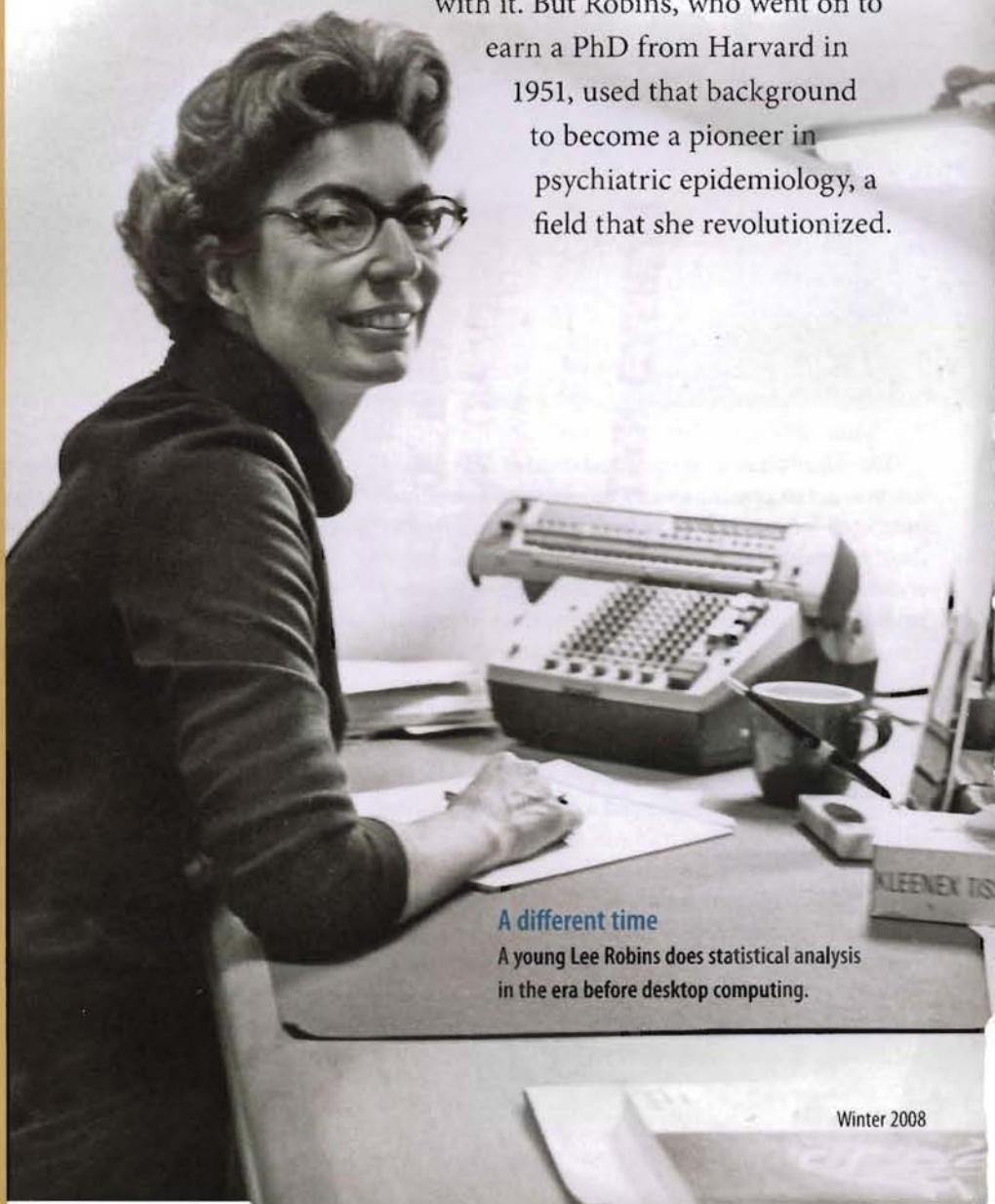


Some of Robins' enduring contributions to the scientific literature.

AS A CHILD GROWING UP in Louisiana, Lee Nelken Robins was filled with questions. What made people do the things they did? Why did they behave violently? Above all, she wanted to know why countries resorted to warfare. "I was very anti-war," she recalls today, "and I wondered why anyone would want to start a war. Even as a teenager, that's what I thought about."

As she headed off to Radcliffe for college, her older brother gave her some life-changing advice: Study sociology. At the time, it was not the most popular major — and it wasn't entirely clear what she would do

with it. But Robins, who went on to earn a PhD from Harvard in 1951, used that background to become a pioneer in psychiatric epidemiology, a field that she revolutionized.



## A different time

A young Lee Robins does statistical analysis in the era before desktop computing.





Lee Robins, PhD, with her husband, Hugh Chaplin Jr., MD

"Lee Robins is one of the giants of psychiatric epidemiology," says Kathleen K. Bucholz, PhD, professor of psychiatry. "Her contributions span the 1960s to the present, and even now, in deliberations about the latest diagnostic nomenclature, her name is invoked by the leading researchers who recall her influence and recommendations."

Her particular genius, rooted in her childhood, was devising carefully honed questions for surveys that gather information about the origins and incidence of mental illness. Armed with this data, she has illuminated important issues — drug addiction, alcoholism and suicide, among others — in a host of groundbreaking books and more than 350 scholarly articles.

"Simple elegance has always been her trademark," says Linda B. Cottler, PhD, MPH, professor of epidemiology in psychiatry. "Her fine-tooth comb is the best I've ever seen. She never failed to get to the bottom of something and always said: 'If it doesn't seem right, it probably isn't.'"

As a university faculty member, she crossed academic boundaries, working at the medical school and on the Danforth Campus. In 1954, she began as a research assistant in psychiatry, moving up to professor of sociology in psychiatry in 1968. The university honored her multidisciplinary career in 1991 by naming her a University Professor of the Social Sciences. A decade later, she became professor emeritus of sociology in psychiatry.

But her influence lingers, through the dozens of trainees whom she mentored, through the master's program in psychiatric epidemiology that she founded, and through her own landmark research. One early project, tracing the later history of young patients from a child guidance clinic, resulted in a celebrated book — *Deviant Children Grown Up: A Sociological and Psychiatric Study of Sociopathic Personality* — showing that antisocial behavior in youth was the strongest predictor of adult problems.

In the 1970s, Robins embarked on a government-sponsored study of Vietnam veterans who had been addicted to heroin or opium while overseas. Would they remain

addicted back home and create a new layer of problems in American society? She came back with the "startling revelation that many recovered spontaneously from their addiction upon their return," says Bucholz, "thus challenging notions of the irreversible nature of this form of addiction."

Other key studies followed, most of them supported by the National Institutes of Health. During the 1980s, she played a central role in the Epidemiologic Catchment Area (ECA) study, one of the first to assess the prevalence of mental illness in the community. She developed structured interview questions, known as the Diagnostic Interview Schedule (DIS), that allowed investigators to evaluate patients reliably. Afterwards, the World Health Organization asked Robins to create a multicultural version of the DIS that is now used internationally. She also serves to this day as a member of the National Institute of Medicine.

Today, her many awards line shelves in her apartment. In 1975, she won the Rema Lapouse Award from the American Public Health Association. Later, she received a presidential commendation from the American Psychiatric Association and was elected to the American Academy of Arts & Sciences. In 2005, she served as honorary grand marshal at the university's Commencement.

Robins' ties to the university include family connections. Her first husband, the late Eli Robins, MD, was a distinguished psychiatrist and head of the Department of Psychiatry from 1963 to 1975. One of her four sons, Jamie, who is now an epidemiology faculty member at the Harvard School of Public Health, graduated from the School of Medicine in 1976. Her second husband, Hugh Chaplin Jr., MD, is professor emeritus of medicine and pathology.

Altogether, Robins posed thousands of questions during her career, but the answer to one eludes her. "I still don't know why people go to war," she admits. "That is one question I never answered." □

## Living legacy

Robins inspired a "second generation" of researchers like Linda B. Cottler, PhD, MPH, who worked with and learned much from Robins. Now, Cottler and others are training the third generation. "Her influence is far-reaching," says Cottler. "There are hundreds of people around the globe who have been touched personally by Lee's teachings."





# Nursing memories

**Celebrating accomplishments and renewing old friendships**

**N**EARLY 100 NURSING ALUMNAE traveled to St. Louis from locations across the nation to attend the School of Nursing reunion held on September 19–20, 2008. The two-day event, which honored classes ranging from 1945 to 1964, featured a luncheon and breakfast at the Chase Park Plaza Hotel, a tour of the Barnes-Jewish Goldfarb School of Nursing, and a guided bus tour of St. Louis. At the luncheon, medical school Dean Larry J. Shapiro, MD, acknowledged the important contribution made by the nursing alumnae, both to Washington University School of Medicine and the medical community.



Violet Schroeder, NU 48, spoke during the luncheon about the major changes that have taken place in medicine since nursing alumnae first entered the field.







Mary Devous, NU 48, models the nursing cap worn by School of Nursing students.



Jo Ann Hediger, NU 55, offers a warm welcome to Vetta Fitzgerald, NU 50.



Smiles abounded, as seen here on the face of Roberta Middlekamp, NU 49.



Alumnae from the Class of 1956 continued to catch up with friends at the breakfast hosted at the Chase Park Plaza Hotel.



Class of 1945: Front, l-r: Toni Zeigler, B.J. Haskins, Gloria McCanna. Back, l-r: Mary Stewart, Edna Dependahl, Jeanne Mill.



Nursing alumnae enjoyed a tour of the Goldfarb School of Nursing at Barnes-Jewish College, where they saw firsthand how advances in technology have changed nursing education.



# Second Century Awards

The 2008 Second Century Awards were presented at a dinner held at the Ritz-Carlton Hotel in Clayton on September 20.

The awards, bestowed annually since 1991, mark Washington University School of Medicine's entry into its second century of leadership in patient care, teaching and research.

**Jane Phillips-Conroy, PhD**, is professor of anatomy and neurobiology at Washington University School of Medicine and professor of anthropology in Arts & Sciences. Her internationally known research focuses on free-ranging primates to understand how behavioral, demographic and ecological variables function to influence population structure. She has studied baboons in Ethiopia and Zambia, and primates in Tanzania, Kenya and Guyana. The graduating class of 2008 named Phillips-Conroy Preclinical Teacher of the Year, her second such honor. A four-time recipient of the Professor of the Year award from the first-year medical class, she also has received the Goldstein Leadership Award in Medical Student

Education and won 13 Distinguished Service Teaching awards. She is a member of the American Association for the Advancement of Science and of the Academy of Science of St. Louis, and was recognized in 2000 with a Distinguished Faculty Award at Washington University's Founders Day.

**Charles F. "Chuck" Knight**, who holds an honorary doctor of science degree from Washington University, is chairman emeritus of Emerson, a technology-based global manufacturing firm headquartered in St. Louis. For 13 years, he was a Trustee of Washington University. In 2001, the Olin School of Business opened the Charles F. Knight Executive Education Center, recognizing his longtime

support. Knight and his wife, Joanne, later established the Charles F. and Joanne Knight Distinguished Directorship in Executive Education. Chuck Knight chairs the Business National Council and serves on the National Council of the School of Medicine, where the Knights established the Charles F. and Joanne Knight Distinguished Professorship in Orthopaedic Surgery. The Joanne Knight Breast Health Center and Breast Cancer Program were dedicated in 2007 in appreciation of the Knights' generosity and leadership supporting advances at the Alvin J. Siteman Cancer Center. Chuck Knight is Barnes-Jewish Hospital's emeritus chair for life. In 2002, the hospital unveiled its Charles F. Knight Emergency and Trauma Center.

**Michael J. Welch, PhD**, is professor of radiology and of developmental biology at Washington University School of Medicine, of chemistry in Arts & Sciences and of biomedical engineering in the School of Engineering. His work on the rapid synthesis of positron-labeled organic chemicals was of vital importance in the development of positron emission tomography (PET) at Washington University in the early 1970s, and in the subsequent application of the technology to diagnostic medicine. Welch's production of novel radiopharmaceutical imaging agents was the basis for breakthrough clinical research on breast and prostate tumor localization. A member of the Institute of Medicine of the National Academy of Sciences, he is currently on the Board on Health Science Policy and has served on Institute committees and on the private organization's Clinical Research Roundtable. Among his many awards is the 2004 Cassen Prize from the Society of Nuclear Medicine Education and Research Foundation.

Michael J. Welch, PhD, left, Jane Phillips-Conroy, PhD, and Charles F. "Chuck" Knight are the 2008 award recipients.







Eliot Committee members from the university's many schools and programs gathered for a reception after their respective kickoff meetings. Stephen R. Crespin, MD, associate professor of clinical medicine and a member of the School of Medicine's Eliot Committee, right, catches up with Dr. Sunny Pervil and her husband, Alan, both members of the University Libraries Eliot Committee.

**E**arly this fall, the membership committee for the School of Medicine's Eliot Society met to discuss last year's results and the coming year's goals. School of Medicine supporters typically represent a significant portion of Washington University's William Greenleaf Eliot Society and, true to form, the 2007-08 School of Medicine Eliot Society reached a record-setting 839 members.

This milestone was announced at the committee's annual kickoff meeting by Patricia A. Penkoske, MD 74, who is again chairing the effort for 2008-09 after presiding over last year's success. Penkoske welcomed a committee nearly as diverse as the School's Eliot Society itself, which includes alumni from all the School's programs as well as former residents, school faculty, grateful patients and friends of the School. The 18 meeting attendees included MD alumni, faculty and former residents, as well as the directors for the school's top-ranked Programs in Audiology

## Proven formula for success Eliot Society focused on surpassing last year's record total

*William Greenleaf Eliot Society*

and Communication Sciences, Occupational Therapy and Physical Therapy, all of whom were present as both representatives of their programs and as Eliot Society members.

Eliot Society member Larry J. Shapiro, MD 71, executive vice chancellor for medical affairs and dean of the School of Medicine, updated committee members on the School's current strong status and future plans. He spoke in detail about the School's expanding effort to reduce student debt through enhanced scholarship support, noting the important role the Eliot Society plays in this support each year.

Before closing the meeting, Penkoske noted that a focused effort would be needed to reach the 2008-09 goal of 900 members, which includes the committee's goal of recruiting 210 new members. Committee members are responding by personally reaching out to fellow alumni, colleagues and friends and inviting them to join; their enthusiasm suggests another record-setting year is within reach.

## Planning under way for MD Reunion 2009: Please join us

Where you belong!

**REunion**  
2009

*Gather with your classmates  
in St. Louis • May 7-9, 2009*



*Reunion Class Volunteers are planning the festivities*

**1949**

Robert H. Lund, MD 49

**1954**

Gerald L. Behrens, MD 54  
Andrew McCanse, MD 54

**1959**

Charles Norland, MD 59  
Ann Randolph Flipse, MD 59

**1964**

Steven L. Teitelbaum, MD 64  
Carolyn B. Robinowitz, MD 64

**1969**

C. Garrison Fathman, MD 69

**1974**

Dolores R. Tucker, MD 74  
Ronald K. DeGuerre, MD 74

**1979**

Jeffrey L. Craver, MD 79  
Mary Anne Rudloff, MD 79  
Jeffrey M. Wright, MD 79

**1984**

Edward S. Rollins, MD 84,  
HS 90  
Susan D. Rollins, MD 84

**1989**

To be determined

**1994**

To be determined

**1999**

To be determined

For more details on MD Reunion 2009, visit: [medicalalumni.wustl.edu](http://medicalalumni.wustl.edu)



## 1930s

### I. Jerome Flance, MD 35

Flance continues working to bring better education and health services to underserved children and adults in north St. Louis.

### Howard A. Steiner, MD 38

Steiner retired in 1998 after a long career in radiology. In addition to having a private practice, he served as assistant professor of radiology at Case Western Reserve University School of Medicine and chief of radiology at the Cleveland VA Medical Center. He now lives in a retirement home in Chagrin Falls OH. Steiner urges others in his class to contribute to the Alumni Arrow.

### Robert M. Hardaway, MD 39

Hardaway recently retired, after 40 years in the U.S. Army and 20 years at Texas Tech Medical School (now Texas Tech University Health Sciences Center). He has written 10 books and 417 articles on shock and trauma. He resides in Tucson AZ.

## 1940s

### William A. Anderson, MD 42

Anderson is retired from medicine and lives in a retirement community in Williamsburg VA. He still drives and goes to the gym every morning. He volunteers at the Dewitt-Wallace Museum and mentors elementary school students. He also studies French and goes to the movies twice a week.

### James R. Herz, MD 42

Before attending Washington University School of Medicine, Herz served during World War II. An orthopedic clinic he began in 1958 just celebrated its 50th anniversary; he and his founding partners were presented a Senatorial Certificate of Commendation for their years of service to the community of Reno NV.

### Glenn O. Turner, MD 42

Turner authored a book, *Recognizing and Surviving Heart Attacks and Strokes — Lifesaving Advice You Need Now*, that was published by the University of Missouri Press in April 2007. He resides in Springfield MO.

### Martin Bergmann, MD 45

Bergmann is retired but has been medical director and a primary care practitioner at Volunteers in Medicine Free Clinic in St. Charles MO for three years. He also is an avid newspaper reader and enrolls in a class each semester at the University of Missouri-St. Louis, studying everything from philosophy to economics.

### George M. Ewing, MD 46

Ewing practices full time in allergy and immunology at Queen's Medical Center in Honolulu HI. He and his wife, Juanita, have two daughters and three grandchildren.

### H. Glenn Kellogg, MD 47

For the past nine years, Kellogg has taught first-year medical students about doctor-patient relationships at the University of



Barry A. Siegel, MD 69, professor of radiology and medicine, and Patricia Goldhoff, a third-year medical student, enjoy a moment together at the inaugural Scholars in Medicine Donor Recognition Dinner held on November 22. Siegel helped to establish the Class of 1969 Scholarship Fund in 1994 to honor his 25th-year Reunion. Goldhoff is one of this year's recipients of the Class of 1969 Scholarship Fund.

## Celebrating scholarships

Donors and students came together at the inaugural annual Scholars in Medicine Donor Recognition Dinner held on November 22 at the Ritz-Carlton Hotel. The event celebrated the generosity of those who support School of Medicine education, and included medical students and students in the Programs in Physical Therapy, Occupational Therapy, and Audiology and Communication Sciences. As the science of medicine changes, curriculum and teaching methods are adapted. To sustain this progress, costs increase and tuition climbs, making the generosity of our scholarship donors all the more crucial, now and in the years ahead.



California-San Diego School of Medicine. He also chairs the San Diego County Medical Societies Retired Physicians Society. He lives in San Diego CA.

**Herbert O. Sieker, MD 48**

Seiker retired in 1988 after a long career at Duke University Medical Center as professor of medicine and assistant dean. He and his wife, Dot, live in Durham NC, but spend much of their time in their home on the North Carolina Coast. They recently celebrated 60 years of marriage.

## 1950s

**Gilbert Hermann, MD 50**

Hermann is retired from the practice of general surgery. In his spare time, he teaches and takes courses in the Adult Education Program at the University of Denver. He and his wife, Jane, reside in Denver CO.

**James Griffin, MD 54**

Griffin works for the state of Mississippi, reviewing applications for disability for Social Security. He also enjoys hunting and fishing. He lives in Madison MS.

**John W. Hard, MD 54**

Hard retired after what he considers three careers in medicine — as a general surgeon in Illinois and Arkansas, as director of the emergency department of Baptist Medical Center in Montclair AL, and as medical director of Medical Malpractice Insurance Co. In his free time, he takes communion to shut-ins, tends his flower garden and walks his dog. His wife, Roselyn, died in 1995. He lives in Birmingham AL.

**Robert W. Parsons, MD 54**

Parsons is professor emeritus in surgery and pediatrics at the University of Chicago. He still teaches, conducts clinics and operates at the Shriners Hospital for Children in Chicago. He and his wife, Elise, recently moved to an independent-living apartment in La Grange Park IL. They enjoy their church, concerts and bridge.

**Richard D. Aach, MD 59**

Aach recently retired from his position as associate dean at Case Western Reserve University. He continues to volunteer there, primarily interviewing applicants. He and his wife, Janet, reside in Shaker Heights OH. They have four children and five grandchildren.

**Neil W. Culp, MD 59**

Culp, who lives in Sacramento CA, is retired from medicine. He and his wife, Peg, have hiked in Switzerland and cruised on the Nile, Yangtze and Danube rivers in recent years. They are planning a 50th wedding anniversary trip to Hawaii with their children and grandchildren.

**Paul DeBruine, MD 59**

DeBruine, who lives in Decatur IL, retired after 35 years of practicing anesthesiology. He and his wife, Ruth, have four children and eight grandchildren. His hobbies include hiking, golf, collecting antiques and a little farming.

**Albert Oberman, MD 59**

Oberman is partially retired from the Department of Medicine at the University of Alabama but still serves as vice chairman of the Institutional Review Board. He also recently completed a three-year stint on the Medical School Admissions Committee. He lives in Mountain Brook AL.

## 1960s

**Mordecai P. Blaustein, MD 61**

Blaustein received the 2008 Novartis Award for Hypertension Research from the American Heart Association Council for High Blood Pressure Research. He received this award for his discovery of the molecular mechanisms (sodium pump, sodium-calcium exchanger and endogenous ouabain) that explain how excessive dietary salt causes hypertension.

**Paul Schwartz, MD 64**

Schwartz, who lives in Holden MA, closed his private cardiology office in 2007. He now works part-time in the diagnostic lab and teaches residents and students at UMass Memorial Medical Center. He and his wife belong to two book clubs and

spend a lot of time at their beach home in Maine. They also enjoy spending time with their six grandchildren.

**George Randall, MD 69**

Randall is the founder and president of Mid-Kansas Ear, Nose and Throat Association and past president of the Medical Society of Sedgwick County. He also is a member of the board of trustees of Oklahoma City University. He and his wife, Mary Ellen, have two children and eight grandchildren. In his spare time, he enjoys golf, tennis, hunting and fly fishing. He resides in Wichita KS.

**Paul R. Williams, MD 69**

Williams has traveled to 105 nations in the past 25 years for medical missions. He also has participated in many international disaster-relief efforts and now is focusing on U.S. disaster relief. He recently authored a book, *Disaster Preparedness: When All Plans Fail*. He lives in Pisgah Forest NC and has six grandchildren.

## 1970s

**Donald R. Graham, MD 74**

Graham is chief of the Division of Infectious Diseases at the Springfield Clinic and clinical professor of medicine at Southern Illinois University School of Medicine. He also serves on the board of trustees of the Illinois State Medical Society and the board of directors of St. John's Hospital in Springfield IL. He and his wife, Patricia, have two children.

**Cecil James Holliman, MD 79**

After 18 years at Pennsylvania State University, Holliman recently became the program manager of the Center for Disaster and Humanitarian Assistance Medicine of the Uniformed Services University of the Health Sciences in Bethesda MD. His primary responsibilities are coordinating health care system reconstruction for Afghanistan. He also continues to help students, residents and junior faculty obtain international clinical rotations and enroll in exchange programs. He resides in Hershey PA.



## Gail Lowenstein, MD 79

After 24 years as the chief medical officer of a nursing home in Queens NY, Lowenstein became medical director of a managed service organization involved with hospice/palliative medicine. She also teaches classes on holistic healing and weight loss to the public. She and her husband live in Glen Head NY with their two children.

## James W. Owen, MD 79

Owen, who lives in Topeka KS, practices diagnostic and interventional radiology in a 25-person practice that covers most of eastern Kansas. He also is medical director for radiology at St. Francis Health Center. He and his wife, Jane, have three children. His son, Bob, is a biology major at Washington University.

## 1980s

### Richard Hartoch, MD 84

Hartoch teaches emergency medicine at Oregon Health Sciences University and the Portland Veterans Administration Medical Center. He and his wife, Catherine Saunders, live in Portland OR with their son, Samuel.

### Rudolph Fedrizzi, MD 89

Fedrizzi and his wife, **Heidi Rinehart, MD 88**, have their own private gynecology practice in Ithaca NY. They have three children, whom he says bring them constant joy and occasional headaches. Fedrizzi has made a number of trips to Italy and is learning to speak Italian. He now prefers gelato to Ted Drewes.

### Michael Steinberg, MD 89, and

### Felice Heller, MD 89

Steinberg is an internist and assistant professor at the University of Connecticut School of Medicine. Heller is a partner in a pediatric cardiology group in Hartford CT and an assistant clinical professor, also at the University of Connecticut School of Medicine. They live in West Hartford with their two daughters and a horse, Coby.

## 1990s

### Susan Garstang, MD 94, and Doug Ball, MD 95

Garstang practices psychiatry and is the residency program director at New Jersey Medical School. Ball is director of bioterrorism preparedness at the New York State Department of Health. They reside in Walkhill NY.

### Steven Wei, MD 94

Wei is in private practice with an orthopedic sports medicine group that covers several local colleges and high schools. He and his wife live in Groton CT with their three children.

### Amanda Cashen, MD 99

Cashen is an assistant professor of medicine in the Division of Leukemia and Bone Marrow Transplantation at Washington University School of Medicine. She divides her time between patient care and clinical research. She and her husband, Matthew, reside in St. Louis MO with their two sons.

### Grace Huang, MD 99

Huang is a hospitalist at Beth Israel Deaconess Medical Center and a physician-educator of learner assessment and survey design. She and her husband, Enoch, live in Newton MA with their three children.

### Sauna Lorenzo-Rivero, MD 99

Lorenzo-Rivero is an assistant professor of surgery (colorectal) at the University of Tennessee College of Medicine. She and her husband enjoy kayaking, canoeing and sightseeing in their new hometown of Chattanooga TN.

### Ikenna Okereke, MD 99

After finishing a general surgery residency at the Cleveland Clinic and a fellowship at Beth Israel Deaconess Medical Center, Okereke joined the faculty of Indiana University School of Medicine. He lives in Indianapolis.

### Larry Tang, MD 99, and Jen Yu, MD 99

Tang is in private practice in radiology, and Yu recently joined the Ophthalmology Department at the University of Washington School of Medicine. They reside in Mercer Island WA.

## 2000s

### Navin Sawhney, MD 00, and Cynthia Santillan, MD 00

After completing a fellowship, Sawhney joined the cardiac electrophysiology department at the University of California San Diego. Santillan also is on UCSD's faculty, as assistant clinical professor of radiology. They live in San Diego CA with their two sons.

### Jamie D. Kemp, MD 04

Kemp is in her first year of a cardiovascular medicine fellowship at the University of Louisville. She says "It's good to be back in Kentucky."

### Cara L. O'Brien, MD 04

O'Brien is an academic hospitalist at Duke University Medical Center. She and her husband, Jamie, live in Durham NC with their three sons.

### Elyse Pine-Twaddell, MD 04

Pine-Twaddell is a first-year fellow in pediatric endocrinology at Johns Hopkins Children's Center. She and her husband, Sandy, live in Ellicott City MD with their daughter.

### Erica Rogers, MD 04

Rogers joined a private practice dermatology group with offices in Hinsdale IL and St. Charles IL. She and her husband, Ed, live in Glen Ellyn IL, with their daughter.

## IN MEMORY

### J.P. Myles Black, MD 43

Black died Aug. 2, 2008, at age 88. He dedicated his life to pulmonary medicine and became a leader in diagnosing and treating tuberculosis in Los Angeles County. He served as assistant chief of endoscopy in the U.S. Army at Fitzsimmons General Hospital, as well as medical director at Olive View Hospital and chief of staff at Holy Cross and Granada Hills hospitals. He also served as clinical professor of medicine at the University of Southern California Medical School, where he was named emeritus in 1983. In his free time, he was an avid horseman and hunter.



**Edward W. Czebrinski, MD 43**

Czebrinski died Oct. 29, 2008, at age 90. He was in private practice with the Grandel Medical Group in St. Louis for 40 years before retiring in 1989. He also was a president of the medical staff and chief of cardiology and internal medicine at the Lutheran Medical Center in St. Louis. Additionally, he served on the faculty of Saint Louis University School of Medicine. During World War II, Czebrinski served in the Army Medical Corps. He is survived by his wife, Marie, a son, two daughters, five grandchildren and two great grandchildren.

**Joseph P. Doyle Jr., MD 44**

Doyle died July 1, 2008, in Crawfordville FL. He was drafted into the U.S. Army while in medical school; after graduating, he served in World War II, the Korean Conflict and the Vietnam War. He retired as a colonel in 1977. Since his military retirement, he practiced medicine in Camilla GA and emergency medicine in Albany GA. He also worked with the Florida Department of Corrections. He attended Central Methodist College and completed a residency in obstetrics/gynecology at Barnes Hospital.

**Jack Barrow, MD 46**

Barrow died on July 5, 2008. He served as associate clinical professor of medicine at Barnes-Jewish Hospital, receiving a Volunteer Clinical Faculty Award from the American Academy of Allergy and Immunology for his many years of training allergy immunology fellows. He also was director of house staff training at Deaconess Hospital and associate staff member and founding member at St. Luke's Hospital. He served in the Korean War and later in the reserves as a commander in the Naval Medical Corps before joining the Washington University faculty in 1951. He was known as a dear friend to many and a wonderful doctor.

**Eugene A. Foster, MD 51**

Foster died July 21, 2008, at age 81. He had a satisfying career as a pathology professor at the University of Virginia Medical School and at Tufts University New England Medical Center. He earned his

## It's *your* reunion. Help us get you to the right one!

MD alumni who earned an additional degree or took a year off from medical school for any reason may not be getting information about their preferred reunion. If you graduated in a different year than the classmates you'd like to see at a reunion, please get in touch with Medical Alumni & Development at (314) 935-9682, toll-free (877) 816-2586, or [alumni@medicine.wustl.edu](mailto:alumni@medicine.wustl.edu).

Tell us your preferred reunion year, and we'll make sure you find familiar faces back on campus.

undergraduate degree from Washington University. Drafted during an internship at Salt Lake City General Hospital, he served with the U.S. Public Health Service on Indian reservations in South Dakota and North Dakota. He then completed pathology residencies at Peter Bent Brigham Hospital in Boston and a surgical pathology residency at Washington University. In his retirement, he conducted a study of the DNA of descendants of Sally Hemings and the Jefferson family, adding significantly to the scientific understanding of the relationship between Sally Hemings and Thomas Jefferson. He lived life to the fullest and enjoyed his years in Charlottesville VA and Boston MA.

**G. Robert Bowles, MD 57**

Bowles died Aug. 10, 2008. He practiced internal medicine for 35 years in Kirkwood MO, followed by five years in Chesterfield MO. He also worked in correctional medicine in Missouri in Vandalia, Farmington and Bowling Green. He enjoyed swimming, tennis and baseball history and was a much-loved member of the Kirkwood community.

**Stanley Baer, MD 62**

Baer died on June 5, 2008, at age 72. He practiced orthopedic surgery in San Francisco CA for 40 years and served

as vice chief and chief of orthopedics at St. Luke's Hospital. He also was affiliated with California Pacific Medical Center and Seton Medical Center in Daly City CA. After interning at the University of Michigan Hospital in Ann Arbor and completing his residency at the University of Miami, Jackson Memorial Hospital, Baer served in the U.S. Air Force Medical Corps from 1967 to 1969. He leaves behind many family, friends and colleagues.

## FACULTY

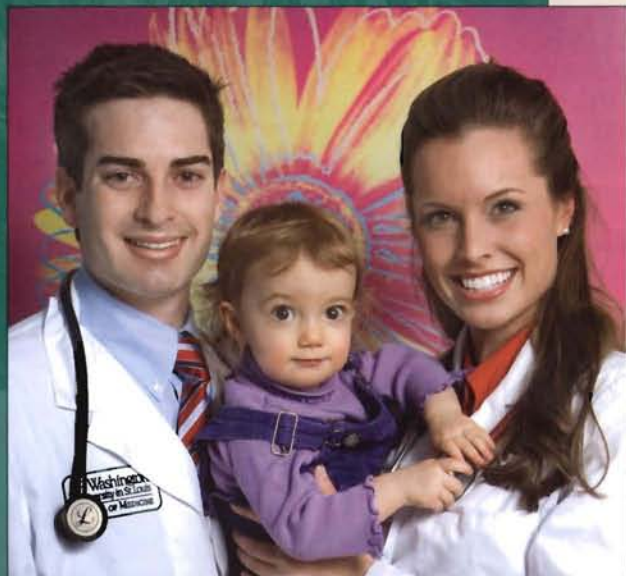
**Donald H. Eldredge, HS 53**

Eldredge, research professor emeritus of otolaryngology, died of complications from Parkinson's disease on June 7, 2008. He conducted laboratory research in physiology of the ear at the Central Institute for the Deaf for 33 years before retiring in 1986. Eldredge earned his undergraduate and medical degrees from Harvard University. He served as a medical officer in the U.S. Army and the U.S. Air Force from 1946 to 1951 before being honorably discharged as a major in the Air Force. He is survived by his wife, four children, four grandchildren and brothers.



# Scholars in Medicine

## SCHOLARSHIP PROGRAM



- Scholarship support is one of the highest priorities of the School of Medicine. As the costs of medical education continue to increase, it is our goal to provide financial support that reduces debt upon graduation and allows students to make career choices based more on passion and less on income.

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## The Rewards Are Many

- You may name your scholarship in memory of a loved one, in tribute to a friend, or in honor of yourself, your family, or your company.
- In the fall, a student will be selected to receive your scholarship, and you will be notified with information about the student.
- You will receive an invitation to the annual scholarship dinner.

## Options for Sponsors

The range for **annual gifts** is \$2,500 to \$25,000 a year. A gift in the upper range will provide a larger percentage of the student's total financial need and reduce the student's debt. Or you may create a **permanent endowment** to establish a named scholarship in perpetuity. This provides stability for the future and frees annual operating income for other urgent needs. A third option is to create a permanent endowment through a gift in your **estate plan**.

### ANNUAL SCHOLARSHIPS

Danforth Circle Annual Scholarship	\$25,000
Patron's Annual Scholarship	\$10,000
Benefactor's Annual Scholarship	\$5,000
Fellow's Annual Scholarship	\$2,500

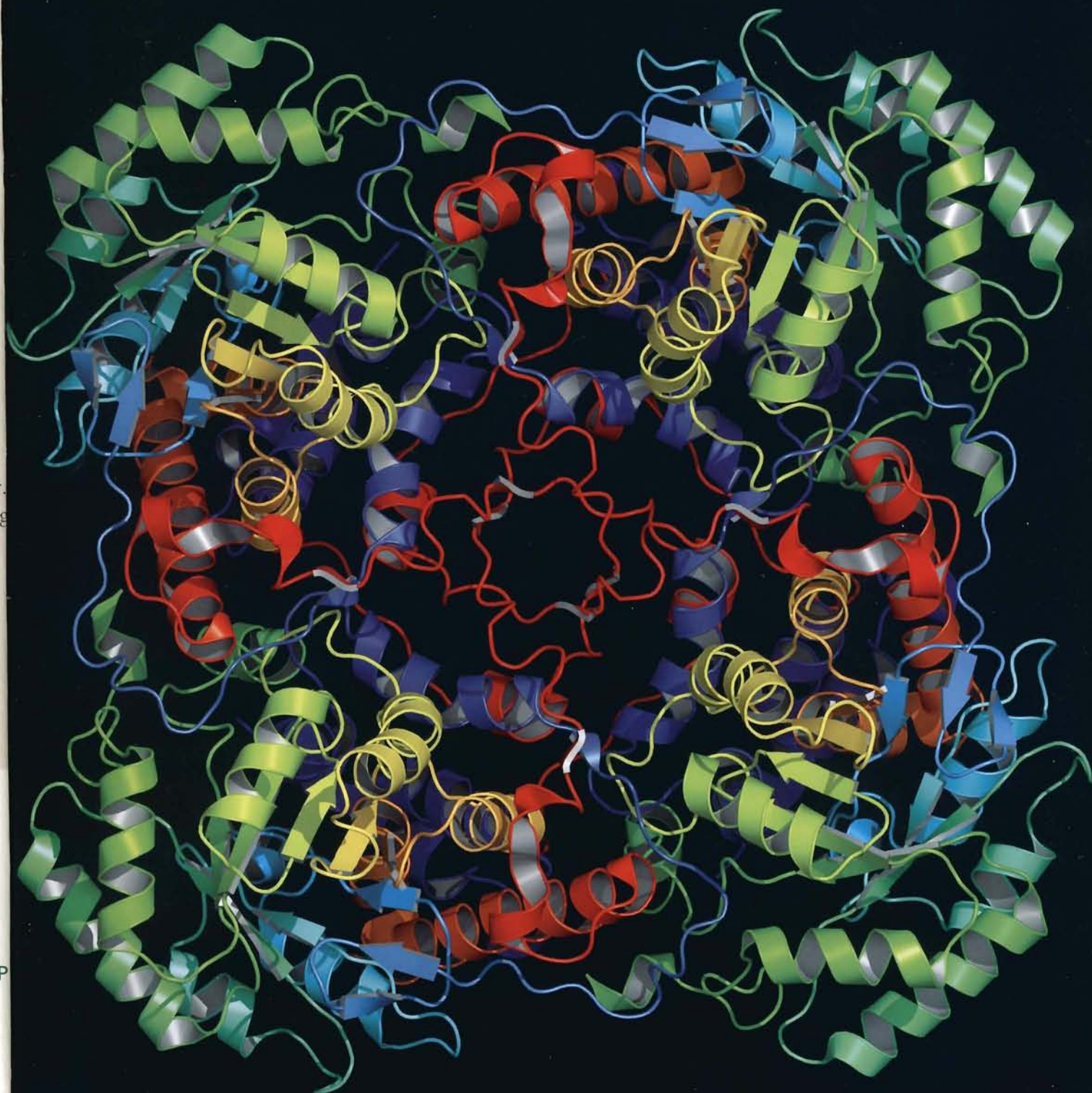
### PERMANENTLY ENDOWED SCHOLARSHIPS

Benefactor's Endowed Scholarship	\$500,000+
Founder's Endowed Scholarship	\$250,000
Sustaining Endowed Scholarship	\$100,000
Endowed Scholarship	\$50,000



Annual Scholarship sponsors Jack Pierce, emeritus professor of medicine, and his wife Susan, meet scholarship awardee Ian Dorward who graduated with the Class of 2005 and is a neurosurgery resident at WUSM.

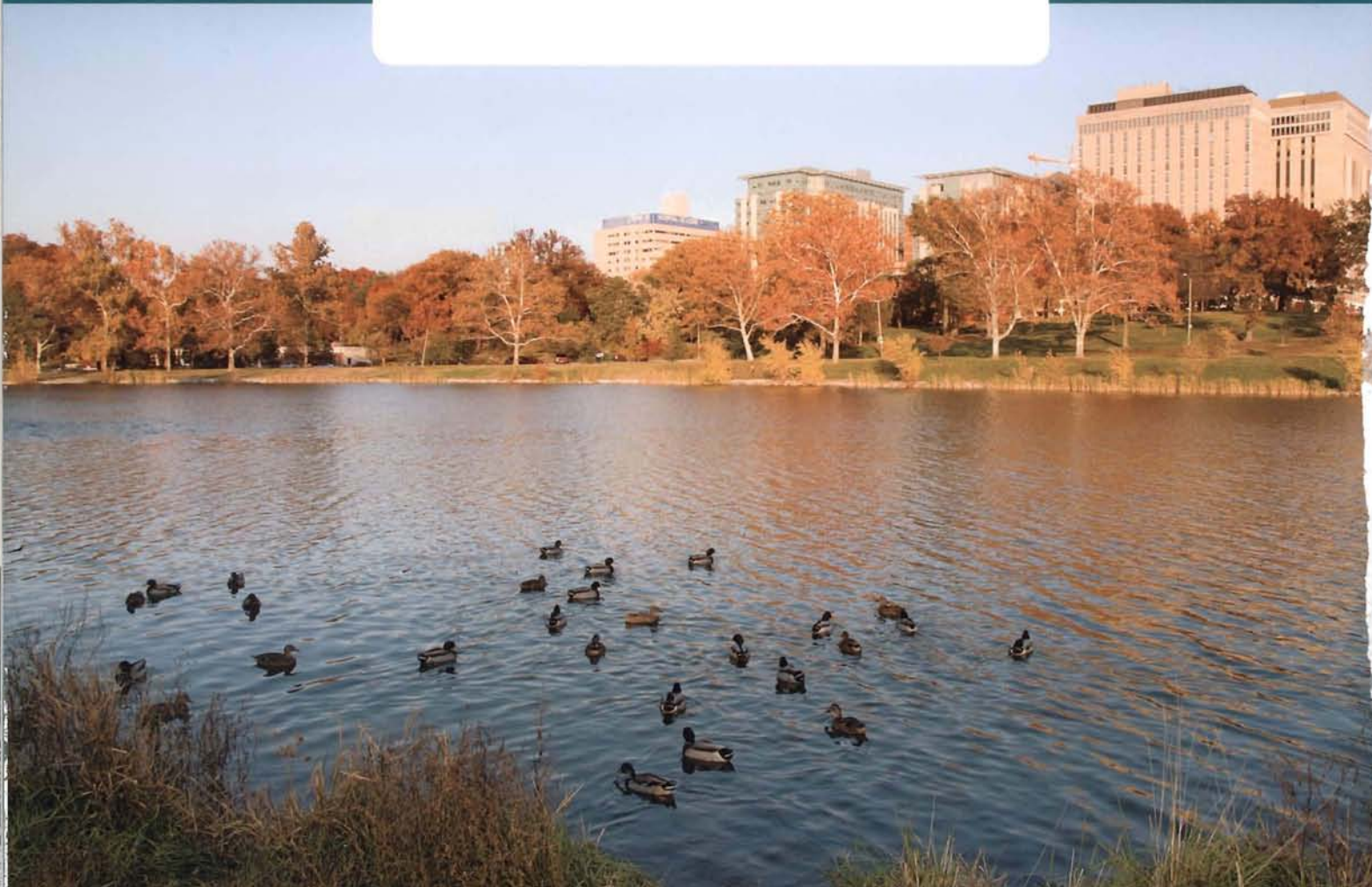




**Modeling proteins** Researchers use three-dimensional data to study the important link between the structure of biological molecules and their ability to successfully carry out the processes of life. Pictured is the flavin-binding domain of the enzyme Flavocytochrome b2 (1KBJ), which plays a role in electron transfer during metabolism. This structure was solved by the lab of F. Scott Mathews, PhD, Department of Biochemistry. Image rendered by Jason Maynes, PhD, MD.

The Translational Research Support team at Becker Medical Library can help graduate students, staff, postdocs and faculty use databases and related software tools to solve information problems and maximize research productivity. For assistance with molecular structure tools like the one used to create this image, biological databases and software, or any other bioinformatics services, please contact Kristi L. Holmes, PhD, or Lili Wang, MS, MD, at: [BioInfo@wusm.wustl.edu](mailto:BioInfo@wusm.wustl.edu).





ROBERT BOSTON

**Medical Center reflections** One of America's foremost academic medical centers sits alongside one of its largest municipal parks. Between his regularly scheduled shoots of physicians and patients, surgical ORs and labs, students and campus scenes, photographer Robert Boston visited Forest Park seasonally for two years. His photo essay beginning on page 17 reveals the beauty of the park and its many attractions. In scenes like this, the park's biological bounty contrasts with the antiseptic environs of Washington University Medical Center. Forest Park is a nearby oasis few people — especially photographers — can resist.



Washington University in St. Louis  
SCHOOL OF MEDICINE